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Lab Assignment 6 - Part 2 - Post Lab

CSC3320 System Level Programming (Lab time: Thursday 4-5pm)

Part A:

Questions:

1) Attach a screenshot of the output in step 4.

```
[aiftikhar2@gsuad.gsu.edu@snowball ~]$ ./foo.sh
x= 14
[aiftikhar2@gsuad.gsu.edu@snowball ~]$
```

2) Describe what does the shell script **foo.*sh*** do?

- First, it declares two variables. x=0, i=1
- Then, while loop runs 3 times.
  - i=1: s=1, x=1, i++
  - i=2: s=4, x=5, i++
  - i=3: s=9, x=14, i++
  - i=4: while loop breaks (condition not met)
- Finally, print value of x (i.e., x=14).

Part B:

Question:

Attach a screenshot of the output.

```
[aiftikhar2@gsuad.gsu.edu@snowball ~]$ ./foo.sh 5
x= 55
[aiftikhar2@gsuad.gsu.edu@snowball ~]$
```

In this case, a parameter is passed (inside while loop's condition), whose value is 5.

Part C:

Question:

Attach a screenshot of the output.

```
[aiftikhar2@gsuad.gsu.edu@snowball ~]$ ./foo.sh
please input a number
5
x= 55
[aiftikhar2@gsuad.gsu.edu@snowball ~]$
```

In this case, a user input is taken.

My Final Shell Script:

```
[aiftikhar2@gsuad.gsu.edu@snowball ~]$ cat -n foo.sh
     1  #!/bin/bash
     2  #
     3  #foo.sh in Part A of Lab 6 - Part 1
     4  #
     5
     6  x=0 #initialization x = 0
     7  i=1
     8  echo please input a number
     9  read num
    10  while [ $i -le $num ] #while(i<=3)
    11  do
    12  s=`expr $i \* $i` #s=i*1
    13  x=`expr $s + $x`
    14  i=`expr $i + 1` #i=i+1
    15  done
    16
    17  echo x= $x
[aiftikhar2@gsuad.gsu.edu@snowball ~]$
```

Part D:

Question:

Then put the source code of **foo.java** in your answer sheet.

```
//foo.java
class foo {
   public static void main(String[] args) {
        int x=0;
        int i=1;
        int s;
        while (i<=3){
                s=i*i;
                x=s+x;
                i=i+1;
        }
        System.out.println("x = "+x);
        }
}
```

```
[aiftikhar2@gsuad.gsu.edu@snowball ~]$ cat -n foo.java
     1  //foo.java
     2  class foo {
     3      public static void main(String[] args) {
     4          int x=0;
     5          int i=1;
     6          int s;
     7          while (i<=3){
     8                  s=i*i;
     9                  x=s+x;
    10                  i=i+1;
    11          }
    12          System.out.println("x = "+x);
    13          }
    14  }
[aiftikhar2@gsuad.gsu.edu@snowball ~]$ javac foo.java
[aiftikhar2@gsuad.gsu.edu@snowball ~]$ java foo
x = 14
[aiftikhar2@gsuad.gsu.edu@snowball ~]$
```

Part E:

Questions:

1) Attach a screenshot of the output in step 4.

```
[aiftikhar2@gsuad.gsu.edu@snowball ~]$ vi hello.c
[aiftikhar2@gsuad.gsu.edu@snowball ~]$ cc hello.c
[aiftikhar2@gsuad.gsu.edu@snowball ~]$ ls
a.out          foo.class  hello.c    hw2_rough.txt  Lab4      Result
checkError.sh  foo.java   hello.sh   hw2Rough.txt   practice  simple.sh
csc3320        foo.sh     homeworks  Lab3           public
[aiftikhar2@gsuad.gsu.edu@snowball ~]$ ./a.out
Hello,world
[aiftikhar2@gsuad.gsu.edu@snowball ~]$
```

2) Try following command to compile and link **hello.c** again. And tell what new file is generated after this command?

$cc -o hello hello.c

hello file is generated.

2) Try command below and attach a screenshot of the output.

$./hello

```
[aiftikhar2@gsuad.gsu.edu@snowball ~]$ ./hello
Hello,world
[aiftikhar2@gsuad.gsu.edu@snowball ~]$
```

4) Now write a new C program named as **myName.c** based on **hello.c**. In this program, print out your first name and last name instead of "Hello,world". For example, the output could be "My name is Yuan Long".

Execute your **myName.c** and attach a screenshot of the output. Then write the source code of **myName.*c*** in your answer sheet and upload your file **myName.*c*** to classroom.

```
[aiftikhar2@gsuad.gsu.edu@snowball ~]$ cc myName.c
[aiftikhar2@gsuad.gsu.edu@snowball ~]$ ./a.out
My name is Aleeza Iftikhar
[aiftikhar2@gsuad.gsu.edu@snowball ~]$
```

```
#include <stdio.h>
char firstName[] = "Aleeza";
char lastName[] = "Iftikhar";
int main(void) {
  printf("My name is %s %s\n", firstName, lastName);
  return 0;
}
```

//----------THE END----------//