Homework 3

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ME19B001

Homework – Session 7

7.1. Execute this script and see the output.

7.2. Modify it to try out your understanding of the regex and code capabilities of awk.


```
abhigyan@abhigyan-samsung: ~/Code/Bash-Scripts

File  Edit  View  Search  Terminal  Help
Peter Parker,Spider-Man,Hero
Tony Stark,Iron Man,Hero
Bruce Banner,Hulk,Hero
Steve Rogers,Captain America,Hero
Natasha Romanoff,Black Widow,Hero
James Logan Howlett,Wolverine,Hero
Thor Odinson,Thor,Hero
Reed Richards,Reed Richards,Hero
Carol Danvers,Captain Marvel,Hero
Viktor von Doom,Dr. Doom,Villain
Norman Osborn,Green Goblin,Villain
Nicholas Fury,Nick Fury,Hero
Otto Octavius,Doc Ock,Hero
Wade Wilson,Deadpool,Antihero
Eddie Brock,Venom,Antihero
Thanos,Thanos,Villain
Scott Lang,Ant Man,Hero
Clint Barton,Hawkeye,Hero
James Rhodes,War Machine,Hero
Nebula,Nebula,Complicated
Pepper Potts,Pepper Potts,Hero
Stephen Strange,Dr. Strange,Hero
T'Challa,Black Panther,Hero
Sam Wilson,Falcon,Hero
Bucky Barnes,Winter Soldier,Hero
Hope van Dyne,Wasp,Hero
Mantis,Mantis,Hero
~
~
"SuperHeroes.csv" 27L, 770C                1,1            All
```
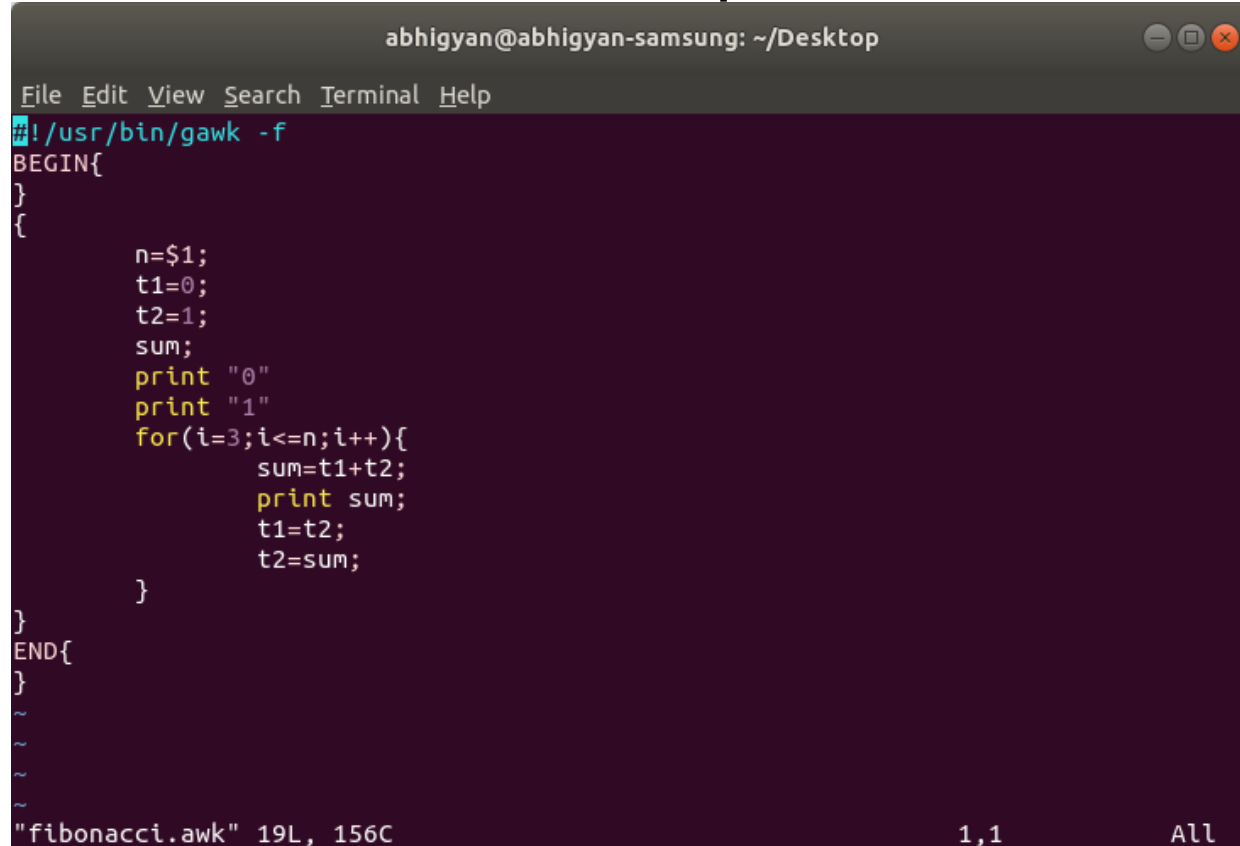
```
abhigyan@abhigyan-samsung: ~/Code/Bash-Scripts

File  Edit  View  Search  Terminal  Help
#/usr/bin/gawk -f
BEGIN{
        print "Welcome to Infinity War!";
        heros=0;
        villains=0;
        complicated=0;
        antiheros=0;
        FS=",";
}
{

        name=$1;
        aka=$2;
        type=$3;
        if(type ~ /^Hero/) heros++;
        if(type ~ /^Antihero/) antiheros++;
        if(type ~ /^Villain/) villains++;
        if(type ~ /^Complicated/) complicated++;
        types[name]=type;
        akas[name]=aka;

}
END{

        print ("Number of heroes are: ",heros);
        print ("Number of villains are", villains);
        print ("Number of antiheroes are", antiheros);
        print ("Number of complicated characters are", complicated);
        for(name in types){
                print(name, ", also known as ", akas[name], " is a ", types[name]);}
        print "end";
}
                                                     1,17          All
```

7.2. Modify it to try out your understanding of the regex and code capabilities of awk.


```
abhigyan@abhigyan-samsung: ~/Code/Bash-Scripts

File  Edit  View  Search  Terminal  Help
abhigyan@abhigyan-samsung:~/Code/Bash-Scripts$ cat SuperHeroes.csv|awk -f Hero-parser.awk
Welcome to Infinity War!
Number of heroes are:  21
Number of villains are 3
Number of antiheroes are 2
Number of complicated characters are 1
Pepper Potts , also known as  Pepper Potts  is a  Hero
Carol Danvers , also known as  Captain Marvel  is a  Hero
Tony Stark , also known as  Iron Man  is a  Hero
Peter Parker , also known as  Spider-Man  is a  Hero
Eddie Brock , also known as  Venom  is a  Antihero
Otto Octavius , also known as  Doc Ock  is a  Hero
Nebula , also known as  Nebula  is a  Complicated
Norman Osborn , also known as  Green Goblin  is a  Villain
T'Challa , also known as  Black Panther  is a  Hero
Clint Barton , also known as  Hawkeye  is a  Hero
Natasha Romanoff , also known as  Black Widow  is a  Hero
Nicholas Fury , also known as  Nick Fury  is a  Hero
Viktor von Doom , also known as  Dr. Doom  is a  Villain
James Logan Howlett , also known as  Wolverine  is a  Hero
Mantis , also known as  Mantis  is a  Hero
Bucky Barnes , also known as  Winter Soldier  is a  Hero
Stephen Strange , also known as  Dr. Strange  is a  Hero
Thor Odinson , also known as  Thor  is a  Hero
James Rhodes , also known as  War Machine  is a  Hero
Scott Lang , also known as  Ant Man  is a  Hero
Wade Wilson , also known as  Deadpool  is a  Antihero
Reed Richards , also known as  Reed Richards  is a  Hero
Thanos , also known as  Thanos  is a  Villain
Hope van Dyne , also known as  Wasp  is a  Hero
```
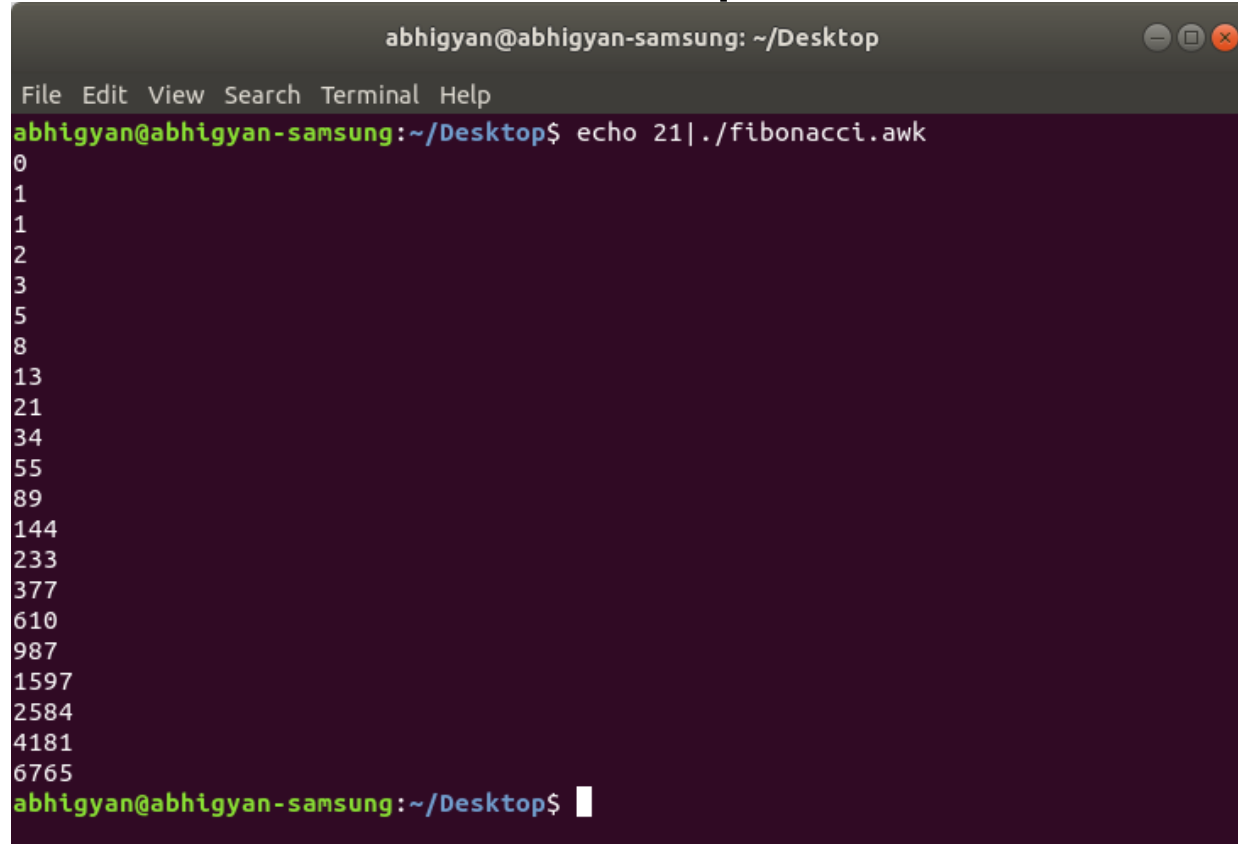
Homework – Session 8

8.1. Write a code in awk that can list n number of Fibonacci numbers where n is a command line input for the script.

```
#!/usr/bin/gawk -f
BEGIN{
}
{
        n=$1;
        t1=0;
        t2=1;
        sum;
        print "0"
        print "1"
        for(i=3;i<=n;i++){
                sum=t1+t2;
                print sum;
                t1=t2;
                t2=sum;
        }
}
END{
}
~
~
~
~
"fibonacci.awk" 19L, 156C                        1,1        All
```

8.1. Write a code in awk that can list n number of Fibonacci numbers where n is a command line input for the script.