DAY 6 PROB 1 PROB 2 PROB 3

REPETITION PRACTISE PROBLEMS WITH FOR LOOP

1.Write a program that takes command line argument n and prints a table of powers of 2 that are less than or equal to 2^n.

#!/bin/bash

Clear

Echo -n “Enter value of m=2” ;

Read m=2

Echo -n “Enter value of n” ;

Read n

Sum = 1

i = 1

While [$i -le $n ]

Do

Sum = ‘expr $sum \ \* $2’

I = ‘expr $i + 1’

Done

Echo -n “The result is : $sum “

2.Write a program that takes a command line argument n and prints the nth harmonic number.

Echo Enter a number

Read n

i=1

sum=0

While [ $i - le $n ]

Do

sum=`expr sum + \ ( 10000 / $ i \ )`

i=`expr $i + i`

Done

Echo sum n series is

i=1

While [ $i - le 5 ]

Do

a=’echo $sum | cut -c $i’

Echo -e “$a \ c” if [ $i - eq 1]

Then

Echo -e “.\c”

Fi

3.Write a program that takes an input and determines if the number is prime.

Number = 53

i=2

flag=0

While test $i - le `expr $number /2`

Do

If test `expr $number % $i` -eq 0

Then

flag=1

Fi

i=’expr $i + 1`

Done if test $flag - eq1

Then

Echo “The number is not prime”

Else

Echo “The number is not prime”

Fi

4.Extend the program to take a range of number as input and output the Prime Numbers in that range.

Set -vx

Echo “Enter a number”

Read N

I=$N

j=2

Until [ $J == $N ]

Until

Do

If [ `expr $I % $J` ==0 ]

Then

Echo “The number is not prime”

Exit

Else

J = `expr $J + 1`

Fi

Done

Echo “The number is not prime”

5. Write a program that computes a factorial of a number taken as input

Echo “Enter a number”

Read num

fact=1

For ( ( i=2; i<=num ; i++ ))

{

Fact = $(( fact \* i ))

}

Echo $fact