Home work sheet-Loops

1. Write a program in C to make such a pattern like a pyramid with a number which will repeat the number in the same row.

1

2 2

3 3 3

4 4 4 4

#include <stdio.h>

int main() {

for(int i=1;i<=4;i++)

{

for(int j=0;j<i;j++)

{

printf("%d",i);

}

printf("\n");

}

return 0;

}

1. Write a program in C to display the n terms of harmonic series and their sum. 1 + 1/2 + 1/3 + 1/4 + 1/5 ... 1/n terms.

#include <stdio.h>

int main() {

float n,b=0,i;

printf("Enter value of n ");

scanf("%f",&n);

for(i=1;i<=n;i++)

{

b=b+(1/i);

}

printf("%f",b);

return 0;

}

1. Write a program in C to display the n terms of square natural number and their sum.

#include <stdio.h>

int main() {

int n,b=0,c,i;

printf("Enter value of n ");

scanf("%d",&n);

for(i=1;i<=n;i++)

{

c=i\*i;

b=b+c;

printf("%d^2 is %d\n",i,c);

}

printf("The sum is %d",b);

return 0;

}

1. Write a C program to display Pascal's triangle. 1

1 1

1 2 1

1 3 3 1

1 4 6 4 1

#include <stdio.h>

void main()

{

int no\_row,c=1,blk,i,j;

printf("Input number of rows: ");

scanf("%d",&no\_row);

for(i=0;i<no\_row;i++)

{

for(blk=1;blk<=no\_row-i;blk++)

printf(" ");

for(j=0;j<=i;j++)

{

if (j==0||i==0)

c=1;

else

c=c\*(i-j+1)/j;

printf("% 4d",c);

}

printf("\n");

}

}

1. Write a program in C to find the number and sum of all integer between 100 and 200 which are divisible by 9.

#include <stdio.h>

void main()

{

for(int j=100;j<200;j++)

{

if (j%9==0)

printf("%d ",j);;

}

}

1. Write a C program to find HCF (Highest Common Factor) of two numbers. Input 1st number for HCF: 24

Input 2nd number for HCF: 28

#include <stdio.h>

void main()

{

int a,b,c=0,j;

printf("Enter two numbers ");

scanf("%d%d",&a,&b);

for(j=a;j>=a;j--)

{

if((a%j==0)&&(b%j==0))

{

break;

}

}

printf("%d is hcf of %d and %d",j,a,b);

}

1. Write a program in C to check Armstrong number of n digits.

#include <stdio.h>

void main()

{

int a,n,d,f;

printf("Enter a number ");

scanf("%d",&a);

n=a;

while(n>0)

{

d=n%10;

n=n/10;

f=f+d\*d\*d;

}

if(a==f)

printf("The number is Armstrong Number");

else

printf("The number is not an Armstrong Number");

}

1. #include <stdio.h> int main()

{

int i = 1024;

for (; i; i >>= 1) printf("Quiztime");

return 0;

}

How many times will “Quiztimebe” printed in the above program?

It will be printed 11 times.

1. #include<stdio.h> int main()

{

int n;

for (n = 9; n!=0; n--)

printf("n = %d", n--); return 0;

}

Predict the output..

n = 9n = 7n = 5n = 3n = 1n = -1n = -3n = -5n = -7n = -9n = -11n = -13n…………

1. Write a C program to find power of a number using for loop.

#include <stdio.h>

void main()

{

int a,n,d=1;

printf("Enter a number and its power ");

scanf("%d%d",&a,&n);

for(int i=1;i<=n;i++)

{

d=d\*a;

}

printf("%d",d);

}

1. C program to convert Octal to Hexadecimal number system

#include <stdio.h>

void main()

{

int d;

printf("Enter a octal number ");

scanf("%o",&d);

printf("Its hexadecimal number is %x",d);

}

1. What will be the output of the C program, if input is 6?

Its output will also be 6.