Programming in C

CS 102.3

Practical 05

Group A

30245

1.

While

#include<stdio.h>

int main()

{

int x=1;

while(x<=100)

{

printf("%d ",x);

x++;

}

}

Do While

#include<stdio.h>

int main()

{

int x=1;

do

{

printf("%d ",x);

x++;

}while (x<=100);

}

For loop

#include<stdio.h>

int main()

{

int x;

for(x=1;x<=100;x++)

{

printf("%d ",x);

}

}

2.

#include<stdio.h>

int main()

{

int i;

float marks,avg,total=0;

for (i=1;i<=10;i++)

{

printf("Enter your mark ");

scanf("%f",&marks);

total=total+marks;

}

avg=total/10;

printf("Your total is %f \n",total);

printf("Your average is %f \n",avg);

if(avg<50)

printf(" FAIL! ");

else

printf(" PASS! ");

}

3.

#include <stdio.h>

int main()

{

int num,temp,total=1;

printf("Enter the number ");

scanf("%d",&num);

if(num==0)

{

printf("Factorial of %d is 1",num);

}

else

{

temp=num;

while(temp!=0)

{

total=total\*temp;

temp--;

}

printf("Factorial of %d id %d ",num,total);

}

}

4.

#include <stdio.h>

int main()

{

int num,digit,sum=0;

printf("Enter a number ");

scanf("%d",&num);

while(num>0)

{

digit=num%10;

sum=sum+digit;

num=num/10;

}

printf("The sum of the digits is %d \n",sum);

}

5.

#include <stdio.h>

int main() {

int number, reversenum = 0, remainder;

printf("Enter a number: ");

scanf("%d", &number);

do {

remainder = number % 10;

reversenum = reversenum \* 10 + remainder;

number = number / 10;

} while (number > 0);

printf("The number reversed is: %d\n", reversenum);

return 0;

}

6.

#include <stdio.h>

int main() {

int i,base,n,power=1;

printf("Enter the base: ");

scanf("%d",&base);

printf("Enter the exponent: ");

scanf("%d",&n);

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

power\*=base;

}

printf("The %dth power of %d is: %d\n",n,base,power);

return 0;

}

7.

#include <stdio.h>

int main() {

int first=0,second=1,next,i;

printf("The first 10 Fibonacci numbers are: \n");

for(i=0;i<10;i++){

if(i==0 || i==1){

next=i;

}else{

next=first+second;

first=second;

second=next;

}

printf("%d ",next);

}

return 0;

}

8.

#include <stdio.h>

int main(){

int number,temp,digit,sum=0;

printf("Enter a number: ");

scanf("%d",&number);

temp=number;

while(temp>0){

digit=temp%10;

sum=sum+digit\*digit\*digit;

temp=temp/10;

}

if(sum==number){

printf("The number %d is an Armstrong number.\n",number);

}else{

printf("The number %d is not an Armstrong number.\n",number);

}

return 0;

}

9.

#include <stdio.h>

int main(){

char ch;

for(ch ='A';ch<='Z';ch++){

printf("The ASCII value of %c is: %d\n",ch,ch);

}

return 0;

}

10.

#include <stdio.h>

int main(){

int i,j,n;

printf("Enter the number of rows: ");

scanf("%d",&n);

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

for(j=1;j<=i;j++) {

printf("\*");

}

printf("\n");

}

return 0;

}

11.

#include <stdio.h>

int main(){

int number,i,flag=1;

printf("Enter a number: ");

scanf("%d",&number);

for(i=2;i<=number/2;i++){

if(number%i==0){

flag=0;

break;

}

}

if(flag==1){

printf("The number %d is prime.\n",number);

}else{

printf("The number %d is not prime.\n",number);

}

return 0;

}

12.

#include <stdio.h>

int main(){

int number,i;

printf("Enter a number: ");

scanf("%d",&number);

for(i=1;i<=number;i++){

if(number%i==0){

printf("%d ",i);

}

}

return 0;

}

13.

#include <stdio.h>

int main() {

int number, sum = 0;

printf("Enter a number: ");

scanf("%d", &number);

while (number != -1) {

sum += number;

printf("Enter a number: ");

scanf("%d", &number);

}

printf("The sum is: %d\n", sum);

return 0;

}

14.

#include <stdio.h>

int main() {

int arr[10];

int i;

printf("Enter 10 numbers: ");

for (i = 0; i < 10; i++) {

scanf("%d", &arr[i]);

}

printf("The array is: ");

for (i = 0; i < 10; i++) {

printf("%d ", arr[i]);

}

printf("\n");

return 0;

}

15.

#include <stdio.h>

int main() {

int arr[10];

int i, count = 0;

printf("Enter 10 numbers: ");

for (i = 0; i < 10; i++) {

scanf("%d", &arr[i]);

}

printf("The array is: ");

for (i = 0; i < 10; i++) {

printf("%d ", arr[i]);

if (arr[i] % 2 == 0) {

count++;

}

}

printf("\n");

printf("The number of even numbers is: %d\n", count);

return 0;

}