**Practical No.05**

1. #include<stdio.h>

int main()

{

int count=1;

do

{

printf("%d",count);

count++;}

while(count<=100);

}

#include<stdio.h>

int main()

{

int y;

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

{

printf("%d",y);

}

}

#include<stdio.h>

int main()

{

int count=0,y=1;

while(count<100)

{

printf("%d",y);

count++;

y++;}

}

2. #include<stdio.h>

int main()

{

float avg,marks,sum;

int count=0;

while(count<10)

{

printf("Enter your marks");

scanf("%f",&marks);

count++;

sum=sum+marks;

}

avg=sum/count;

printf("sum is %f",sum);

printf("Avg is %f",avg);

}

3. #include<stdio.h>

int main()

{

int number,c=1,d=1;

printf("Enter a number to calculate factorial");

scanf("%d",&number);

if(number<0)

{printf("Error: Can’t calculate the factorial of a negative number");}

else{

do

{

c=c\*d;

d++;

}

while (d<=number);

printf("Factorial is %d",c);}

}

4. #include<stdio.h>

int main()

{

int sum=0,number,i=1;

printf("Enter a number");

scanf("%d",&number);

do

{

sum=sum+i;

i++;

}

while(i<=number);

printf("Total is %d",sum);

}

5. #include<stdio.h>

int main()

{

int reverse=0,number,d=0;

printf("Enter a number to reverse the digits");

scanf("%d",&number);

do

{

d=number%10;

reverse=reverse\*10+d;

number=number/10;

}

while (number>0);

printf("Reversed number is %d",reverse);

}

6. #include<stdio.h>

int main()

{

int number,exponent,i=1,a=1;

printf("Enter the base");

scanf("%d",&number);

printf("Enter the exponent");

scanf("%d",&exponent);

do

{

a=a\*number;

i++;

}

while(i<=exponent);

printf("Answer=%d",a);

}

7. #include<stdio.h>

int main()

{

int a=0,b=1,c=0,x=1;

while(x<11)

{

c=a+b;

b=a;

a=c;

printf(" %d ",c);

x++;

}

}

8. #include<stdio.h>

int main ()

{

int number,a=0,total=0,digits=0;

printf("Enter a number");

scanf("%d",&number);

int original=number;

do

{ number=number/10;

digits++;

}

while(number>0);

number=original;

do

{

a=number%10;

total=total+pow(a,digits);

number=number/10;

} while(number>0);

if (original == total)

printf("%d is an Armstrong number",original);

else

printf("%d is not an Armstrong number",original);

}

* **Part B**

1.#include <stdio.h>

int main() {

int num, positiveCount = 0, negativeCount = 0, zeroCount = 0;

printf("Enter 10 numbers:\n");

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

printf("Number %d: ", i);

scanf("%d", &num);

if (num > 0)

positiveCount++;

else if (num < 0)

negativeCount++;

else

zeroCount++;

}

printf("\nNumber of positive numbers: %d\n", positiveCount);

printf("Number of negative numbers: %d\n", negativeCount);

printf("Number of zeros: %d\n", zeroCount);

return 0;

}

2. #include <stdio.h>

int main() {

int marks[10];

int i, sum = 0, max, min;

printf("Enter the marks of 10 students:\n");

// Input marks

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

printf("Student %d: ", i + 1);

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

sum += marks[i];

// Update max and min marks

if (i == 0) {

max = marks[i];

min = marks[i];

} else {

if (marks[i] > max)

max = marks[i];

if (marks[i] < min)

min = marks[i];

}

}

// Calculate average marks

double average = (double)sum / 10;

// Output results

printf("\nMaximum marks: %d\n", max);

printf("Minimum marks: %d\n", min);

printf("Average marks: %.2lf\n", average);

return 0;

}

3. #include <stdio.h>

int main() {

float price[10];

int i, count = 0;

float sum = 0.0;

printf("Enter the price of 10 items:\n");

// Input price

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

printf("Item %d: ", i + 1);

scanf("%f", &price[i]);

sum += price[i];

// Count items with price > 200

if (price[i] > 200)

count++;

}

// Calculate average value of an item

float average = sum / 10;

// Output results

printf("\nAverage value of an item: %.2f\n", average);

printf("Number of items with price greater than 200: %d\n", count);

return 0;

}

4.

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