**Assignment-II**

1) Write a program to check weather a number is prime or not.

Sol:

#include<iostream>

using namespace std;

bool isPrime(int n)

{

if(n<=1) return false;

for(int i=2;i\*i<=n;i++)

{

if(n%i==0) return false;

}

return true;

}

int main()

{

int number;

cout<<"Enter a number:";

cin>>number;

if(isPrime(number))

{

cout<<number<<"is prime number:"<<endl;

}

else

{

cout<<number<<"is not a prime number:"<<endl;

}

return 0;

}

Output:

Enter the number: 8

8 is not a prime number.

2)Write a program to generate first N prime numbers. Accept N from user.

Sol:

#include<iostream>

using namespace std;

bool isPrime(int n)

{

if(n<=1) return false;

for(int i=2;i\*i<=n;i++)

{

if(n%i==0) return false;

}

return true;

}

int main()

{

int N, count=0, num=2;

cout<<"Enter the value of N:";

cin>>N;

cout<<"First"<<N<<"prime numbers are:"<<endl;

while(count<N)

{

if(isPrime(num))

{

cout<<num<<"";

count++;

}

num++;

}

cout<<endl;

return 0;

}

Output:

Enter the value of N:10

First10prime numbers are:

2357111317192329

3)Write a program to generate following pyramid.

A

AB

ABC

……A……………………..Z

Sol:

#include<iostream>

using namespace std;

int main()

{

for(char i='A'; i<='Z'; i++)

{

for(char j='A'; j<=i; j++)

{

cout<<j;

}

cout<<endl;

}

return 0;

}

Output:

A

AB

ABC

ABCD

ABCDE

ABCDEF

ABCDEFG

ABCDEFGH

ABCDEFGHI

ABCDEFGHIJ

ABCDEFGHIJK

ABCDEFGHIJKL

ABCDEFGHIJKLM

ABCDEFGHIJKLMN

ABCDEFGHIJKLMNO

ABCDEFGHIJKLMNOP

ABCDEFGHIJKLMNOPQ

ABCDEFGHIJKLMNOPQR

ABCDEFGHIJKLMNOPQRS

ABCDEFGHIJKLMNOPQRST

ABCDEFGHIJKLMNOPQRSTU

ABCDEFGHIJKLMNOPQRSTUV

ABCDEFGHIJKLMNOPQRSTUVW

ABCDEFGHIJKLMNOPQRSTUVWX

ABCDEFGHIJKLMNOPQRSTUVWXY

ABCDEFGHIJKLMNOPQRSTUVWXYZ

4) Write a menu driven program to perform mathematical operations on two numbers.

1.Add

2.Sub

3.Mul

4.Div

5.Exit

accept the menu option and numbers form user.

Sol:

#include<iostream>

using namespace std;

int main()

{

int choice;

double num1, num2;

do

{

cout<<"Menu"<<endl;

cout<<"Add"<<endl;

cout<<"subtract"<<endl;

cout<<"Multiply"<<endl;

cout<<"Divide"<<endl;

cout<<"Exit"<<endl;

cout<<"Enter your choice:";

cin>>choice;

if(choice>=1 && choice<=4)

{

cout<<"Enter two numbers:";

cin>>num1>>num2;

}

switch(choice)

{

case 1:

cout<<"Result"<<num1+num2<<endl;

break;

case 2:

cout<<"Result"<<num1-num2<<endl;

break;

case 3:

cout<<"Result"<<num1\*num2<<endl;

break;

case 4:

if(num2!=0)

cout<<"Result"<<num1/num2<<endl;

else

cout<<"Error: Division by zero"<<endl;

break;

case 5:

cout<<"Exiting the program:"<<endl;

break;

default:

cout<<"Invalid choice! Please try again."<<endl;

break;

}

cout<<endl;

}while(choice!=5);

return 0;

}

Output:

Menu

Add

subtract

Multiply

Divide

Exit

Enter your choice:2

Enter two numbers:20 40

Result-20

Menu

Add

subtract

Multiply

Divide

Exit

Enter your choice:5

Exiting the program:

5) Generate following pyramid, accept the level from the user as input

1

12

123

………..1…………………………N

Where N is the level accepted as input.

Sol:

#include<iostream>

using namespace std;

int main()

{

int N;

cout<<"Enter the number of levels:";

cin>>N;

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

{

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

{

cout<<j<<"";

}

cout<<endl;

}

return 0;

}

Output:

Enter the number of levels:5

1

12

123

1234

12345