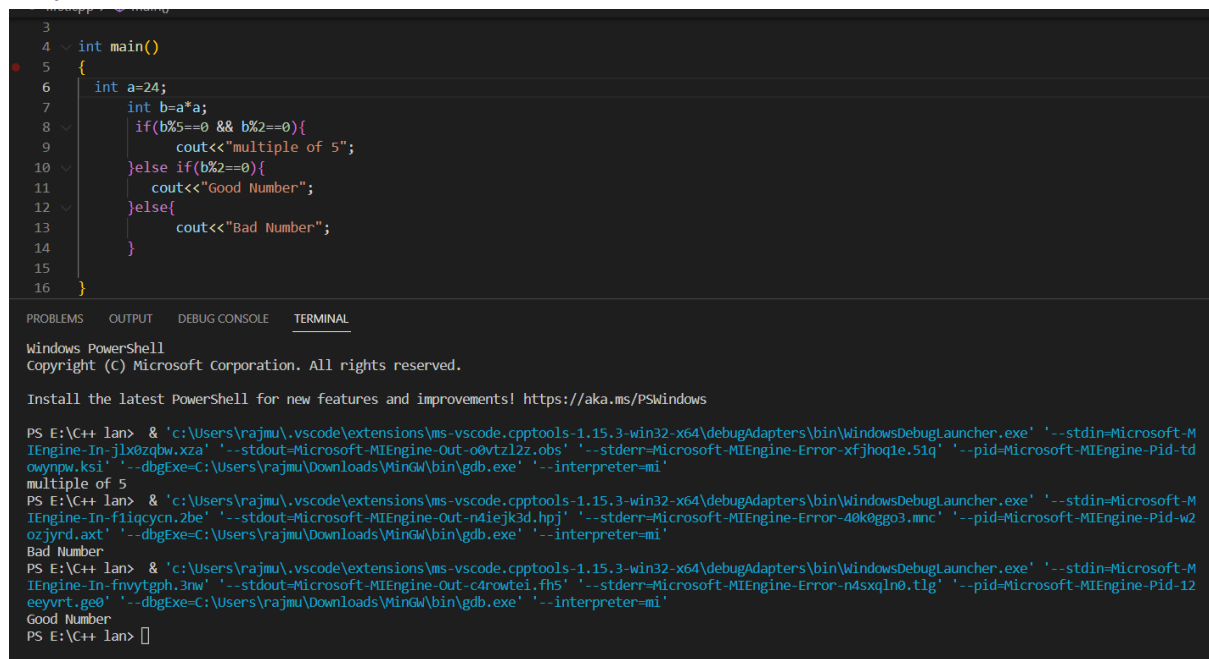


Q.if number is divided by 5 and the number is even then print a multiple of 5 and if not a multiple of 5 but it even prints good else prints badly.

```
=> int a=100;
    int b=a*a;
    if(b%5==0 && b%2==0){
        cout<<"multiple of 5";
    }else if(b%2==0){
        cout<<"Good Number";
    }else{
        cout<<"Bad Number";
    }
}
```



```
3
4 int main()
5 {
6     int a=24;
7     int b=a*a;
8     if(b%5==0 && b%2==0){
9         cout<<"multiple of 5";
10    }else if(b%2==0){
11        cout<<"Good Number";
12    }else{
13        cout<<"Bad Number";
14    }
15 }
16 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Windows PowerShell  
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PS E:\C++ lan> & 'c:\Users\rajmu\.vscode\extensions\ms-vscode.cpptools-1.15.3-win32-x64\debugAdapters\bin\windowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-jlx0zqbw.xza' '--stdout=Microsoft-MIEngine-Out-o0vtz12z.obs' '--stderr=Microsoft-MIEngine-Error-xfjhoq1e.51q' '--pid=Microsoft-MIEngine-Pid-tdowynpw.ksi' '--dbgExe=C:\Users\rajmu\Downloads\MinGW\bin\gdb.exe' '--interpreter=mi'

multiple of 5

PS E:\C++ lan> & 'c:\Users\rajmu\.vscode\extensions\ms-vscode.cpptools-1.15.3-win32-x64\debugAdapters\bin\windowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-f1iqcyn.2be' '--stdout=Microsoft-MIEngine-Out-n4iej3d.hpj' '--stderr=Microsoft-MIEngine-Error-40k0ggo3.mmc' '--pid=Microsoft-MIEngine-Pid-w2ozjyrd.axt' '--dbgExe=C:\Users\rajmu\Downloads\MinGW\bin\gdb.exe' '--interpreter=mi'

Bad Number

PS E:\C++ lan> & 'c:\Users\rajmu\.vscode\extensions\ms-vscode.cpptools-1.15.3-win32-x64\debugAdapters\bin\windowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-fnyvtgph.3nw' '--stdout=Microsoft-MIEngine-Out-c4rowtei.fh5' '--stderr=Microsoft-MIEngine-Error-n4sxlno.tlg' '--pid=Microsoft-MIEngine-Pid-12eeyvrt.ge0' '--dbgExe=C:\Users\rajmu\Downloads\MinGW\bin\gdb.exe' '--interpreter=mi'

Good Number

PS E:\C++ lan> □

Q1.Convert Fahrenheit to Celsius.

=>

The first step:-check how to convert Fahrenheit to Celsius formula is  $c = (f - 32) * 5/9$

The second step:-convert that formula into coding means

```
{int f=0;
int c;
cout<<"value is "<<f;
cin>>f;
c=(f-32)*5/9;
cout<<"Fahrenheit to Celsius is "<<c;}
```

```

3
4  int main()
5  {int f=0;
6  int c;
7  cout<<"value is "<<f;
8  cin>>f;
9  c=(f-32)*5/9;
10 cout<<"Fahrenheit to Celsius is "<<c;
11 }
12 // for (a = 1; a <= 10; a++)
13 // {
14 //     for (b = 1; b <= 10; b++)
15 //     {
16 //         cout << a * b << " ";

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

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PS E:\C++ lan> & 'c:\Users\rajmu\.vscode\extensions\ms-vscode.cpptools-1.15.3-win32-x64\debugAdapters\bin\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-jaylrkrm.wjn' '--stdout=Microsoft-MIEngine-Out-ko21vybh.dl4' '--stderr=Microsoft-MIEngine-Error-1xelfudc.grm' '--pid=Microsoft-MIEngine-Pid-yh' 'tmkjlpl.qwc' '--dbgExe=C:\Users\rajmu\Downloads\MinGW\bin\gdb.exe' '--interpreter=mi'

value is 025  
Fahrenheit to Celsius is -3  
PS E:\C++ lan> & 'c:\Users\rajmu\.vscode\extensions\ms-vscode.cpptools-1.15.3-win32-x64\debugAdapters\bin\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-11v11iic.wfh' '--stdout=Microsoft-MIEngine-Out-s2oawoef.3cp' '--stderr=Microsoft-MIEngine-Error-bimql0ug.pnz' '--pid=Microsoft-MIEngine-Pid-kv' '1d1lop.o21' '--dbgExe=C:\Users\rajmu\Downloads\MinGW\bin\gdb.exe' '--interpreter=mi'

value is 095  
Fahrenheit to Celsius is 35  
PS E:\C++ lan> █

Q2.calculate the volume of a cube.

=>

The first step:-check how to calculate the volume.

the formula of volume = l\*w\*h. as its a cube so length and height and weight are the same so

(formula of volume of cube = l\*l\*l)

The second step:-convert that formula into coding means

```

{int l;
int c;
cout<<"Enter the length of the cube ";
cin>>l;
c=l*l*l;
cout<<"Volume of cube is "<<c;}

```

```

3
4  int main()
5  {
6  int l;
7  int c;
8  cout<<"Enter the length of the cube ";
9  cin>>l;
10 c=l*l*l;
11 cout<<"Volume of cube is "<<c;
12 }
13 // for (a = 1; a <= 10; a++)
14 // {
15 //     for (b = 1; b <= 10; b++)
16 //     {

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

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PS E:\C++ lan> & 'c:\Users\rajmu\.vscode\extensions\ms-vscode.cpptools-1.15.3-win32-x64\debugAdapters\bin\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-kziv3mus.nie' '--stdout=Microsoft-MIEngine-Out-h5hitaua.c3y' '--stderr=Microsoft-MIEngine-Error-01uxtewgw.uhb' '--pid=Microsoft-MIEngine-Pid-o4' 'mzvqjm.3lj' '--dbgExe=C:\Users\rajmu\Downloads\MinGW\bin\gdb.exe' '--interpreter=mi'

Enter the length of the cube 25  
Volume of cube is 15625  
PS E:\C++ lan> █


Q3.find the third angle of a triangle.

=>

As we know the triangle is made by using 180 degrees, we will take 2 inputs, add them and then subtract them from 180 then we will get the third angle.

The second step:-convert that formula into coding means{

```
int a,b,c;
cout<<"Enter the first angle ";
cin>>a;
cout<<"Enter the second angle ";
cin>>b;
c=180-(a+b);
cout<<"Third angle "<<c;}
```



```
3
4 int main()
5 {
6     int a, b, c;
7     cout << "Enter the first angle ";
8     cin >> a;
9     cout << "Enter the second angle ";
10    cin >> b;
11    c = 180 - (a + b);
12    cout << "Third angle " << c;
13 }
14 // for (a = 1; a <= 10; a++)
15 // {
16 //     for (b = 1; b <= 10; b++)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

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PS E:\C++ lan> & 'c:\Users\rajmu\.vscode\extensions\ms-vscode.cpptools-1.15.3-win32-x64\debugAdapters\bin\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-jbi2x5oz.3cn' '--stdout=Microsoft-MIEngine-Out-h3uesw01.lp4' '--stderr=Microsoft-MIEngine-Error-e4x1nm3k.3ql' '--pid=Microsoft-MIEngine-Pid-qo zhqcsj.g4b' '--dbgExe=C:\Users\rajmu\Downloads\MinGW\bin\gdb.exe' '--interpreter=mi'

Enter the first angle 26  
Enter the second angle 95  
Third angle 59  
PS E:\C++ lan> █

Q4.Take a variable int age. if the age is greater than 18 print. "eligible" else print " not eligible"

=>

as it says age should be greater than 18

so we will write code

```
{
int age;
cout<<"Enter your age ";
cin>>age;
if(age<18){
cout<<"NOt Eligible for a vote ";}
else{cout<<"Eligible for a vote ";}}
```

```

3
4 int main()
5 {
6     int age;
7     cout<<"Enter your age ";
8     cin>>age;
9     if(age<18){
10        cout<<"Not Eligible for a vote ";
11    }else{cout<<"Eligible for a vote ";}
12
13    }
14    // for (a = 1; a <= 10; a++)
15    // {
16    //     for (b = 1; b <= 10; b++)

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Install the latest PowerShell for new features and improvements! <https://aka.ms/PSWindows>

PS E:\C++ lan> & 'c:\Users\rajmu\.vscode\extensions\ms-vscode.cpptools-1.15.3-win32-x64\debugAdapters\bin\windowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-jbi2x5oz.3cn' '--stdout=Microsoft-MIEngine-Out-h3uesw01.lp4' '--stderr=Microsoft-MIEngine-Error-e4x1nm3k.3q1' '--pid=Microsoft-MIEngine-Pid-qozhqsj.gdb' '--dbgExe=C:\Users\rajmu\Downloads\MinGW\bin\gdb.exe' '--interpreter=mi'

Enter the first angle 26  
Enter the second angle 25  
Third angle 59  
PS E:\C++ lan> & 'c:\Users\rajmu\.vscode\extensions\ms-vscode.cpptools-1.15.3-win32-x64\debugAdapters\bin\windowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-melqvehj.c2e' '--stdout=Microsoft-MIEngine-Out-ahtdr4xs.iow' '--stderr=Microsoft-MIEngine-Error-jhrygeyz.lf3' '--pid=Microsoft-MIEngine-Pid-v1txxa0l.yz3' '--dbgExe=C:\Users\rajmu\Downloads\MinGW\bin\gdb.exe' '--interpreter=mi'

Enter your age 18  
Eligible for a vote  
PS E:\C++ lan> & 'c:\Users\rajmu\.vscode\extensions\ms-vscode.cpptools-1.15.3-win32-x64\debugAdapters\bin\windowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-iwsindo.eh4' '--stdout=Microsoft-MIEngine-Out-frh5bymv.jtu' '--stderr=Microsoft-MIEngine-Error-2inp4p0k.0e5' '--pid=Microsoft-MIEngine-Pid-mkms5lhx.duy' '--dbgExe=C:\Users\rajmu\Downloads\MinGW\bin\gdb.exe' '--interpreter=mi'

Enter your age 26  
Eligible for a vote  
PS E:\C++ lan> & 'c:\Users\rajmu\.vscode\extensions\ms-vscode.cpptools-1.15.3-win32-x64\debugAdapters\bin\windowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-5fnfgrgy.2ye' '--stdout=Microsoft-MIEngine-Out-l5hrttb.r1q' '--stderr=Microsoft-MIEngine-Error-1zykreck.hpz' '--pid=Microsoft-MIEngine-Pid-v52ice2y.2vn' '--dbgExe=C:\Users\rajmu\Downloads\MinGW\bin\gdb.exe' '--interpreter=mi'

Enter your age 12  
NOT Eligible for a vote  
PS E:\C++ lan> []

Q5.Create a code to check the length of a string = "Hi I'm learning in PFE, I will become a developer". Now if the length is greater than 28 change the string to "I will become a developer". and print "Successfully changed."

=>

To get the length of a string, we use the length() function

so let's start code;

```
{
string text="Hi I'm learning in PFE, I will become a developer";
```

```
if(text.length())>28){
    text="I will become a developer";
cout<<"Successfully changed to : "<<text;
}else{
cout<<"I will become a developer";}
```

```

3
4 int main()
5 {
6     string text="Hi I'm learning in PFE";
7
8
9     if(text.length())>28){
10         text="I will become a developer";
11     cout<<"Successfully changed to : "<<text;
12     }else{
13     cout<<"I will become a developer";
14     }
15     }

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

d3fxmq.dqh' '--dbgExe=C:\Users\rajmu\Downloads\MinGW\bin\gdb.exe' '--interpreter=mi'

Successfully changed to : I will become a developer  
PS E:\C++ lan> & 'c:\Users\rajmu\.vscode\extensions\ms-vscode.cpptools-1.15.3-win32-x64\debugAdapters\bin\windowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-srhbv0jt.lna' '--stdout=Microsoft-MIEngine-Out-sn5xtbrg.mpo' '--stderr=Microsoft-MIEngine-Error-ump4crrs.rvf' '--pid=Microsoft-MIEngine-Pid-5em3xaxz.35f' '--dbgExe=C:\Users\rajmu\Downloads\MinGW\bin\gdb.exe' '--interpreter=mi'

I will become a developer  
PS E:\C++ lan> []

Q6.Change two strings using the third variable.

=>

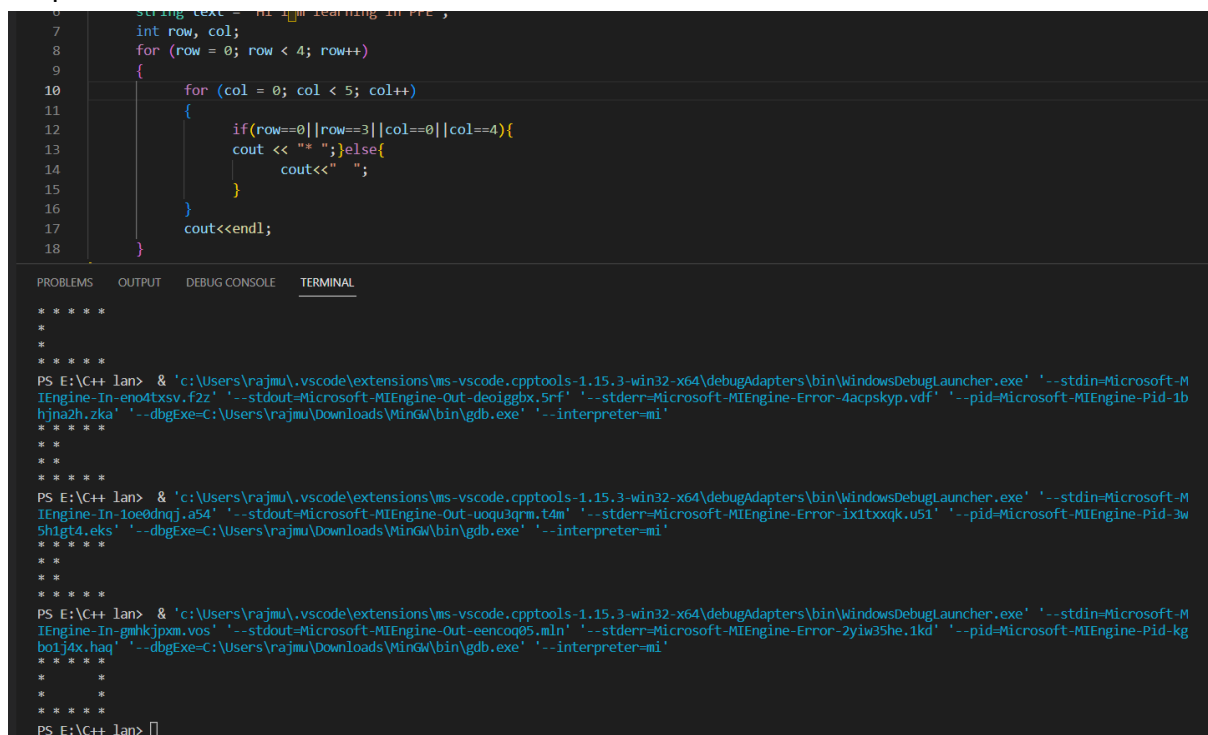
Q7 hollow square Patterns

=>

Code

```
int row, col;
for (row = 0; row < 4; row++)
{
    for (col = 0; col < 5; col++)
    {
        if(row==0||row==3||col==0||col==4){
            cout << "*" ;}else{
                cout<<" ";
            }
        }
        cout<<endl;
    }
}
```

Output:-



```
0 string text = "Hi I'm learning in PFE";
7 int row, col;
8 for (row = 0; row < 4; row++)
9 {
10     for (col = 0; col < 5; col++)
11     {
12         if(row==0||row==3||col==0||col==4){
13             cout << "*" ;}else{
14                 cout<<" ";
15             }
16         }
17         cout<<endl;
18     }
}
```

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

PS E:\C++ lan> & 'c:\Users\rajmu\.vscode\extensions\ms-vscode.cpptools-1.15.3-win32-x64\debugAdapters\bin\windowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-en04txsv.f2z' '--stdout=Microsoft-MIEngine-Out-deoigbxb.5rf' '--stderr=Microsoft-MIEngine-Error-4acpskyp.vdf' '--pid=Microsoft-MIEngine-Pid-1bhjna2h.zka' '--dbgExe=C:\Users\rajmu\Downloads\mingw\bin\gdb.exe' '--interpreter=mi'

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

PS E:\C++ lan> & 'c:\Users\rajmu\.vscode\extensions\ms-vscode.cpptools-1.15.3-win32-x64\debugAdapters\bin\windowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-1oe0dnqj.a54' '--stdout=Microsoft-MIEngine-Out-uouq3qrm.t4m' '--stderr=Microsoft-MIEngine-Error-ix1txqk.u51' '--pid=Microsoft-MIEngine-Pid-3w5higt4.eks' '--dbgExe=C:\Users\rajmu\Downloads\mingw\bin\gdb.exe' '--interpreter=mi'

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

PS E:\C++ lan> & 'c:\Users\rajmu\.vscode\extensions\ms-vscode.cpptools-1.15.3-win32-x64\debugAdapters\bin\windowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-gmhkjpnm.vos' '--stdout=Microsoft-MIEngine-Out-eencoq05.mln' '--stderr=Microsoft-MIEngine-Error-2yiw35he.1kd' '--pid=Microsoft-MIEngine-Pid-kgbolj4x.haq' '--dbgExe=C:\Users\rajmu\Downloads\mingw\bin\gdb.exe' '--interpreter=mi'

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

PS E:\C++ lan>

Q8.square Patterns

=>

Code

```
{
    string text = "Hi I'm learning in PFE";
    int row, col;
    for (row = 0; row < 4; row++)
    {
```

```

        for (col = 0; col < 5; col++)
        {
            cout << "* ";
        }
        cout << endl;
    }
}

```

Output:-

```

* * * * *
* * * * *
* * * * *
* * * * *

```

Q9.half Pyramid patterns

=>

Code

```

int main()
{
    string text = "Hi I'm learning in PFE";
    int row, col;
    for (row = 0; row < 4; row++)
    {
        for (col = 0; col < 4; col++)
        {
            if (row == col || row > col)
            {
                cout << "* ";
            }
        }
        cout << endl;
    }
}

```

Output

```

*
* *
* * *
* * * *

```

Q10.inverted half Pyramid patterns

=>

Code

```

int main()

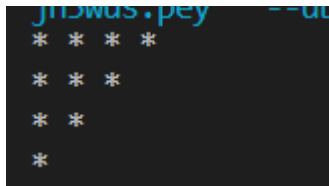
```

```

{
    string text = "Hi I'm learning in PFE";
    int row, col;
    for (row = 0; row < 4; row++)
    {
        for (col = 0; col < 4; col++)
        {
            if (row == col || row < col)
            {
                cout << "* ";
            }
        }
        cout << endl;
    }
}

```

Output



```

* * * *
* * *
* *
*

```

Q11.inverted Pyramid Pattern

=>

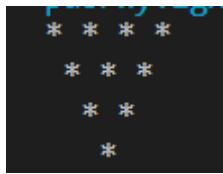
Code

```

int main()
{
    string text = "Hi I'm learning in PFE";
    int row, col;
    for (row = 0; row < 4; row++)
    {
        for (col = 0; col < 4; col++)
        {
            if (row == col || row < col)
            {
                cout << "* ";
            }else{
                cout << " ";}
        }
        cout << endl;
    }
}

```

Output



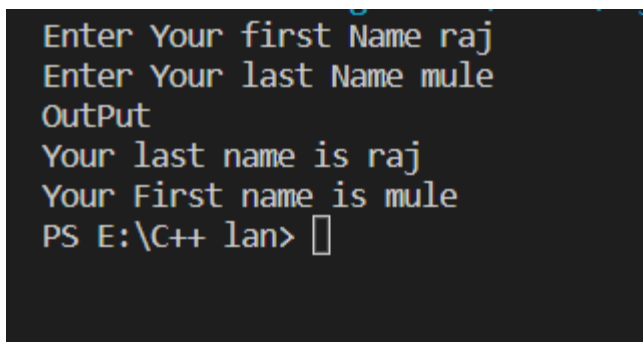
Q12. Change two strings using the third variable.

=>

Code;

```
int main()
{
    string a,s;
    cout<<"Enter Your first Name ";
    cin>>a;
    cout<<"Enter Your last Name ";
    cin>>s;
    bool d=true;
    d=a!=s;
    cout<<"OutPut"<<"\n";
    if(d) {
        cout<<"Your last name is "<<a<<"\n";
        cout<<"Your First name is "<<s;
    }
}
```

Output



Q13.. Change 2 strings without using a third variable.

=>

Code

```
int main()
{
    string a,s;
    cout<<"Enter Your first Name ";
    cin>>a;
    cout<<"Enter Your last Name ";
```



```

cin>>s;
cout<<"OutPut:- "<<"\n";
if(a!=s){
    cout<<"Your last name is "<<a<<"\n";
    cout<<"Your First name is "<<s;
}
}

```

Output

```

Enter Your first Name raj
Enter Your last Name mule
OutPut
Your last name is raj
Your First name is mule
PS E:\C++ lan> 

```

Q14.Create a C++ program to print your details, like name, address, phone number, blood group etc.

=>

Code

```

int main()
{
    string name,address,blood;
    long long int phone;
    cout<<"Enter Your Name ";
    cin>>name;
    cout<<"Enter Your Address ";
    cin>>address;
    cout<<"Enter Your blood group ";
    cin>>blood;
    cout<<"Enter Your phone number ";
    cin>>phone;
    cout<<"OutPut:- "<<"\n";

    cout<<"Your last name is "<<name<<"\n";
    cout<<"Your last address is "<<address<<"\n";
    cout<<"Your last blood is "<<blood<<"\n";
    cout<<"Your last phone number is "<<phone<<"\n";
}

```

Output:

```

C:\Users\rajma> g++ 14.cpp -o 14.exe
Enter Your Name raj
Enter Your Address asdbkj
Enter Your blood group O+
Enter Your phone number 9405941894
OutPut:-
Your last name is raj
Your last address is asdbkj
Your last blood is O+
Your last phone number is 9405941894
PS E:\C++ lan>

```

Q14. Create a C++ program to change the value of a given variable, for example a is initialised as 10 and make it to 20.

=>

Code

```

int main()
{
    int a,s;
    cout<<"Enter Your first Name ";
    cin>>a;

    cout<<"Entered Value is "<<a*2<<"\n";
}

```

Output

```

C:\Users\rajma> g++ 14.cpp -o 14.exe
Enter Your first Name 10
Entered Value is 20
PS E:\C++ lan>

```

Q15. Write a c++ program to print the sum of three numbers.

=>

Code

```

int main()
{
    int a,s,d;
    cout<<"Enter Your first number ";
    cin>>a;
    cout<<"Enter Your second number ";
    cin>>s;
    cout<<"Enter Your third number ";
    cin>>d;
}

```

```

        cout<<"\n";
        cout<<"Addition of 3 number is "<<a+s+d<<"\n";
        cout<<"multiplication of 3 number is "<<a*s*d<<"\n";
    }
}

```

Output

```

Enter Your first number 25
Enter Your second number 65
Enter Your third number 2

Addition of 3 number is 92
multiplication of 3 number is 3250

```

Q16.. Write a c++program to print square of a number.

=>

Code

```

int main()
{
    int a,s,d;
    cout<<"Enter Your number ";
    cin>>a;
    cout<<"\n";
    cout<<"Square of "<< a<<" is "<<a*a<<"\n";
}

```

Output

```

Enter Your number 25

Square of 25 is 625

```

Q17. Write a c++program which initialises a variable name and greets with "Hello< name> , have a good day"

=>

Code

```

#include <iostream>
using namespace std;

int main()
{
    string name;
    cout<<"Enter your name ";
    cin>>name;
    cout<<"Hello "<<name<<" have a good day";
}

```

```
}
```

Output:

```
Enter your name raj
Hello raj have a good day
PS E:\C++ lan>
```

Q18. Try to understand what happens when type casting is done from char to int and int to char.

=>

Code

```
int main()
{
    char a;
    int b;
    cout<<"Enter Character ";
    cin>>a;
    cout<<"Enter Number ";
    cin>>b;
    cout<<"Ascii Values of "<<a<<" is "<<(int)a<<"\n";
    cout<<"A per Ascii value "<<b<<" This stands for 
"<<(char)b<<"\n";
}
```

Output

```
Enter Character A
Enter Number 57
Ascii Values of A is 65
A per Ascii value 57 This stands for 9
PS E:\C++ lan>
```

Q19. Try to print the length of your name and full name, and then print the difference between the characters of the first name and last name. For example: F\_name - Nilkanth  
L\_name - Java Output for the above should be 4.

=>

Code

```
int main()
{
    string fname, lname;
    int a, b;
    cout<<"Enter Your First Name ";
    cin>>fname;
    cout<<"Enter Your Last Name ";
    cin>>lname;
    cout<<"\n";
}
```

```

a=fname.length();
b=lname.length();
cout<<"Diffrance between first name and last name is "<<a-b;
}

```

Output

Q20. Concatenate two Strings Example for two Strings:: String a= Nilkanth String b= Java

Output- NilkanthJava

=>

Code

```

int main()
{
string fname,lname;
int a,b;
cout<<"Enter Your First Name ";
cin>>fname;
cout<<"Enter Your Last Name ";
cin>>lname;
cout<<"\n";
cout<<fname+lname;
}

```

Output:

```

Enter Your First Name raj
Enter Your Last Name muley

Diffrance between first name and last name is -2
PS E:\C++ lab>

```

Q21. Concatenate one String and one integer. Example for one String and two integer: String a = Nilkanth int b = 6197 int c = 1234 Output: Nilkanth61971234

=>

Code

```

int main()
{
string fname,lname;
int a,b;
cout<<"Enter Your First Name ";
cin>>fname;
cout<<"Enter Your Last Name ";
cin>>lname;
cout<<"Enter Your lucky number ";
cin>>a;
cout<<"Enter Your 2nd lucky number ";
cin>>b;
}

```

```
cout<<"\n";
cout<<fname+lname<<a<<b;
}
```

Output

```
Enter Your First Name raj
Enter Your Last Name muley
Enter Your lucky number 10615
Enter Your 2nd lucky number 2404

rajmuley106152404
```

Q22. Print the mathematical table for 5.

=>

Code

```
int i=0;
while(i<10){
    i++;
    cout<<i*5<<endl;
}
```

Output

```
5
10
15
20
25
30
35
40
45
50
```

Q23.. Write a program in Java to find the first 10 natural numbers. Sample output:The natural numbers are:1 2 3 4 5 6 7 8 9 10

=>

Code

```
int i=0;
while(i<10){
    i++;
    cout<<i<<endl;
}
```

Output

1  
2  
3  
4  
5  
6  
7  
8  
9  
10

Q24. Write a program to find the factorial value of any number entered through the keyboard.  
(Using for and while)

=>

Code

```
{
int a,b,c=1;
cout<<"Enter Number ";
cin>>a;
b=a;
while(a/b!=a) {
    c=c*b;
    b--;
}
cout<<"factorial value of Enter Number is "<<c<<endl;
}
```

Output

```
Enter Number 25
factorial value of Enter Number is 2076180480
PS E:\C++ lan>
```

Q25. Print first 30 even numbers and the total of them.

=>

Code

Q.26 Write a c++ program to convert minutes into a number of years and days.

=>

code

```
{
    int min, years, days;
    cout << "Enter Minutes ";
    cin >> min;
```

```

        cout << min << " minutes is approximately " << min / 525600 << "
years and " << min % 525600 / 1440 << " days.";

        return 0;
}

```

Output

```

Enter Minutes 546200
546200 minutes is approximately 1 years and 14 days.
PS E:\C++ lan>

```

Q27.pattern

=>

Code

```

int row, col;
for (row = 4; row > 0; row--)
{
    for (col = 1; col <= 4; col++)
    {
        if (col >= row)
        {
            cout << "*" << " ";
        }
        else
        {
            cout << " ";
        }
    }
    cout << endl;
}

```

Output

```

*
* *
* * *
* * * *

```

Code

```

int row, col;
int s=1;
for (row = 4; row > 0; row--)
{
    for (col = 1; col <= 4; col++)
    {

```



```

        if (col >= row)
        {
            cout << s<<" ";
        }
        else
        {
            cout << " ";
        }
    }
    s++;
    cout << endl;
}

```

Output

```

    1
   2 2
  3 3 3
 4 4 4 4

```

Q28 Write a Java program to break an integer into a sequence of individual digits. Test Data  
Input six non-negative digits: 123456 Expected Output : 1 2 3 4 5 6

=>

Code

```

int a=1234;
int b;
int c,d;
while(a>0){
c=a%10;
cout<<c<<" ";
a=a/10;
}

```

Output

```

4 3 2 1

```

Q29. Prepare a basic calculator mechanism using a switch in java. Addition, subtraction, multiplication, division, squared.

=>

code

```

int main()
{
    int a,b;

    cout<<"Enter Value Of a ";
    cin>>a;

```

```

        cout<<"Enter Value Of b ";
        cin>>b;
        cout<<"Addition of a and b "<<a+b<<endl;
        cout<<"subtraction of a and b "<<a-b<<endl;
        cout<<"multiplication of a and b "<<a*b<<endl;
        cout<<"division of a and b "<<a/b<<endl;
        cout<<"squared of a is "<<a*a<<"squared of b is "<<b*b<<endl;
    }

```

Output

```

Enter Value Of a 2
Enter Value Of b 4
Addition of a and b 6
subtraction of a and b -2
multiplication of a and b 8
division of a and b 0
squared of a is 4squared of b is 16
PS E:\C++ lan> 

```

Q30.Find area of the triangle, rectangle, circle.

=>

code of area of triangle:

```

{
    int a,b;
    float c;
    cout<<"Enter Value Of Height of triangle ";
    cin>>a;
    cout<<"Enter Value Of Base of triangle ";
    cin>>b;
    c=a*b;
    cout<<"Area of Triangle is : "<<c/2<<endl;
}

```

Output:

```

C:\Users\rajind\Documents> g++ 51x.vda -o 51x.exe
Enter Value Of Height of traingle 25
Enter Value Of Base of traingle 23
Area of Traingle is : 287.5
PS E:\C++ lan> 

```

code of area of rectangle:

```

{
    int a,b;
    float c;

```

```

    cout<<"Enter Value Of Length of Rectangle ";
    cin>>a;
    cout<<"Enter Value Of Width of Rectangle ";
    cin>>b;
    c=a*b;
    cout<<"Area of Rectangle is : "<<c<<endl;
}

```

Output

```

Enter Value Of Length of Rectangle 25
Enter Value Of Width of Rectangle 23
Area of Rectangle is : 575

```

code of area of circle:

```

{
    int a,b;
    float c;
    cout<<"Enter Value Of Diameter of circle ";
    cin>>a;
    // cout<<"Enter Value Of Width of Rectangle ";
    // cin>>b;
    c=a*3.14;
    cout<<"Area of Rectangle is : "<<c<<endl;
}

```

Output

```

Enter Value Of Diameter of circle 25
Area of Rectangle is : 78.5

```

Q31.3. Print the below pattern

1234

123

12

1

=>

Code;

```

{
    int row, col;
    int a = 1;
    for (row = 1; row <= 5; row++)
    {
        for (col = 1; col <= row; col++)
        {
            cout << col << " ";

```

```

    }
    cout << endl;
}
a++;
}

```

Q32. Print the below pattern

ABCD

EFG

HI

J

=>

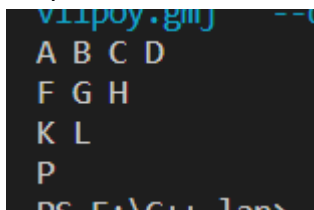
code

```

int row, col;
char a=65;
for (row = 0; row < 4; row++)
{
    for (col = 0; col < 4; col++)
    {
        if (row == col || row < col)
        {
            cout << a << " ";
            a++;
        }
    }
    cout << endl;
}

```

Output



```

A B C D
E F G H
I J K L
M

```

Q33. Generate a random number in Java and check if it is a prime number. Random numbers are generated using random method

=>

code

```

int a=rand();
int b=0;
cout<<"The number is "<<a;
for(int c=1;c<=a;c++){
    if(a%c==0){
        ++b;
    }
}

```

```

}
if(b==2){
cout<<" Its prime  number";}
else{
cout<<"It's not prime Number";
}
}

```

output:

```

Engine-In-ZTWMZM50.ge0 --Stdout=Microsoft-Mi
lrk5b5.vdo' '--dbgExe=C:\Users\rajmu\Downloads\
The number is 41 Its prime  number
PS E:\C++ lan>

```

## Not ans

8. Check what is the number of letter for "K" String: ABCDEFGHIJKLMNOPQRSTUVWXYZ

Example: for D number should be 4

15.2pattern pending

16.write a Java program to calculate the average value of array elements

17.Write a Java program to test if an array contains a specific value.

18.Write a Java program to compute the average value of an array of integers except the largest and smallest values

Q28 Write a Java program to break an integer into a sequence of individual digits. Test Data

Input six non-negative digits: 123456 Expected Output : 1 2 3 4 5 6

