C++ ASSIGNMENT 1.2

1.WAP for printing all natural numbers till 20.

Code:--

```
#include <iostream>
using namespace std;
int main()
{
int i;
cout << "All Natural No's till 20 " << "\n";
for(i=1; i<=20; i++)
{
cout << i << " ";
}
}
```

Output:--

2.WAP for printing all natural numbers in reverse order starting from 20.

Code:--

```
#include <iostream>
using namespace std;
int main()
{
int i;
cout << "All Natural in Reverse Order from 20 " << "\n";
for(i=20; i>=1; i--)
{
cout<< i << " ";
}
}
```

Output:--

3.WAP for printing all even numbers from 1 to 20.

Code:--

```
#include <iostream>
using namespace std;
int main()
{
int i;
cout << "All Even No till 20 " << "\n";
for(i=1; i<=20; i++)
{
if((i%2)==0)
{
cout << i << " ";
}
}
}
```

Output:--

4.WAP for printing all odd numbers from 1 to 20.

Code:--

```
#include <iostream>
using namespace std;
int main()
{
int i;
cout << "All Odd No till 20 " << "\n";
for(i=1; i<=20; i++)
{
if((i%2)!=0)
{
cout<< i << " ";
}
}
}
```

Output:--

```
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PS D:\Prasad\Cpp_prgm>  & 'c:\Users\HP\.vscode\extensions\ms-vscode.cpptools-1.17.5-win32-x64\debugAdapters\bin
\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-3vc4fwgm.5qk' '--stdout=Microsoft-MIEngine-Out-gmfamc
oy.2o5' '--stderr=Microsoft-MIEngine-Error-oqqqck50.bhw' '--pid=Microsoft-MIEngine-Pid-12j1v0ky.my1' '--dbgExe=
C:\MinGW\bin\gdb.exe' '--interpreter=mi'
All Odd No till 20
1 3 5 7 9 11 13 15 17 19
PS D:\Prasad\Cpp_prgm>
```

5.WAP for adding all numbers from 1 to 20.

Code:--

```
#include <iostream>
using namespace std;
int main()
{
int i,j,x;
x = 0;
cout << "Sum of all No till 20 " << "\n";
for(i=1; i<=20; i++)
{
x = i+x;
}
cout << x;
}
```

Output:--

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS D:\Prasad\Cpp_prgm>  & 'c:\Users\HP\.vscode\extensions\ms-vscode.cpptools-1.17.5-win32-x64\debugAdapters\bin
\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-ximnyr0k.4b2' '--stdout=Microsoft-MIEngine-Out-knn5cd
uc.fhb' '--stderr=Microsoft-MIEngine-Error-xlm4qkfa.sf0' '--pid=Microsoft-MIEngine-Pid-xii3wdlm.r3k' '--dbgExe=
C:\MinGW\bin\gdb.exe' '--interpreter=mi'
Sum of all No till 20
210
PS D:\Prasad\Cpp_prgm>
```

6.WAP for finding sum of all even numbers till 20.

Code:--

```
#include <iostream>
using namespace std;
int main()
{
int i,x;
x = 0;
cout << "Sum of all Even No till 20 " << "\n";
for(i=1; i<=20; i++)
{
```

```
if((i%2)==0)
{
x = i+x;
}
}
cout << x;
}
```

Output:--

```
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                    >  & 'c:\Users\HP\.vscode\extensions\ms-vscode.cpptools-1.17.5-win32-x64\debugAdapters\bin
\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-prbmutrk.pe5' '--stdout=Microsoft-MIEngine-Out-dyl0mn
0s.2f5' '--stderr=Microsoft-MIEngine-Error-w3bni54j.5p0' '--pid=Microsoft-MIEngine-Pid-w3wgd0hr.3gl' '--dbgExe=
C:\MinGW\bin\gdb.exe' '--interpreter=mi'
Sum of all Even No till 20
110
PS D:\Prasad\Cpp_prgm>
```

7.WAP for finding sum of all odd numbers till 20.

Code:--

```
#include <iostream>
using namespace std;
int main()
{
int i,x;
x = 0;
cout << "Sum of all Odd No till 20 " << "\n";
for(i=1; i<=20; i++)
{
if((i%2)!=0)
{
x = i+x;
}
}
cout << x;
}
```

Output:--

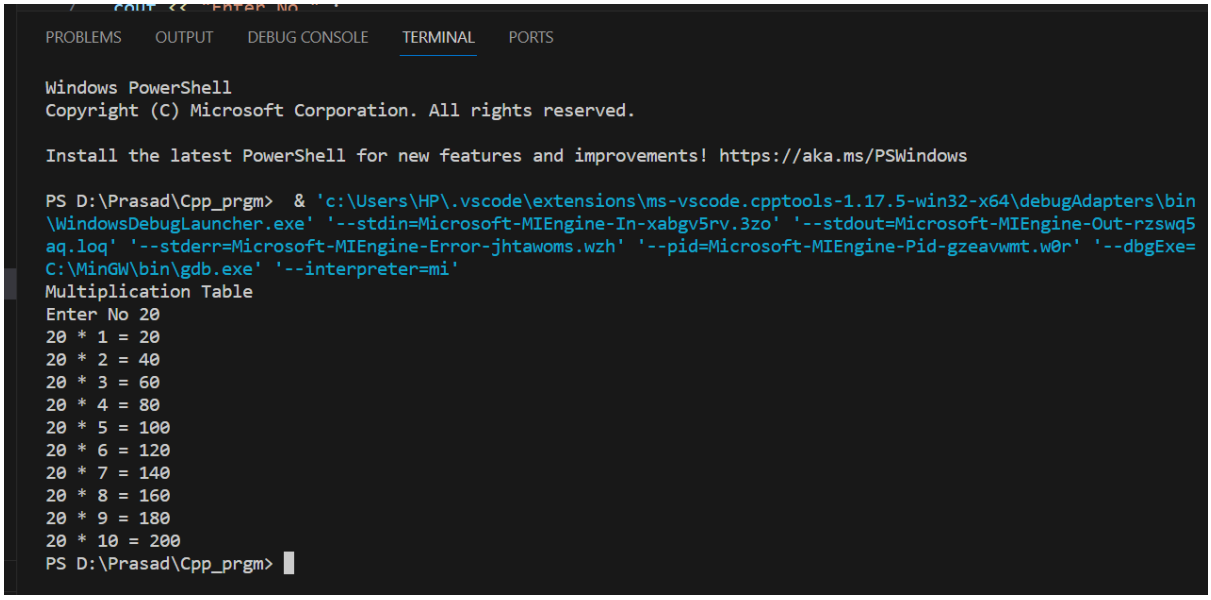
```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS D:\Prasad\Cpp_prgm>  & 'c:\Users\HP\.vscode\extensions\ms-vscode.cpptools-1.17.5-win32-x64\debugAdapters\bin
\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-332z3lqq.2bz' '--stdout=Microsoft-MIEngine-Out-umntfo
kh.spp' '--stderr=Microsoft-MIEngine-Error-x4za4n4i.0ny' '--pid=Microsoft-MIEngine-Pid-glycbtyj.kat' '--dbgExe=
C:\MinGW\bin\gdb.exe' '--interpreter=mi'
Sum of all Odd No till 20
100
PS D:\Prasad\Cpp_prgm>
```

8.WAP for printing multiplication table of a number. For eg. Display should be " 2 X 1 = 2"

Code:--

```
#include <iostream>
using namespace std;
int main()
{
int x,y,i,j;
cout <<"Multiplication Table "<<"\n";
cout << "Enter No " ;
cin >> x;
for(i=1; i<=10; i++)
{
y = x*i;
cout << x <<" * "<< i << " = "<< y << "\n";
}
}
```

Output:--



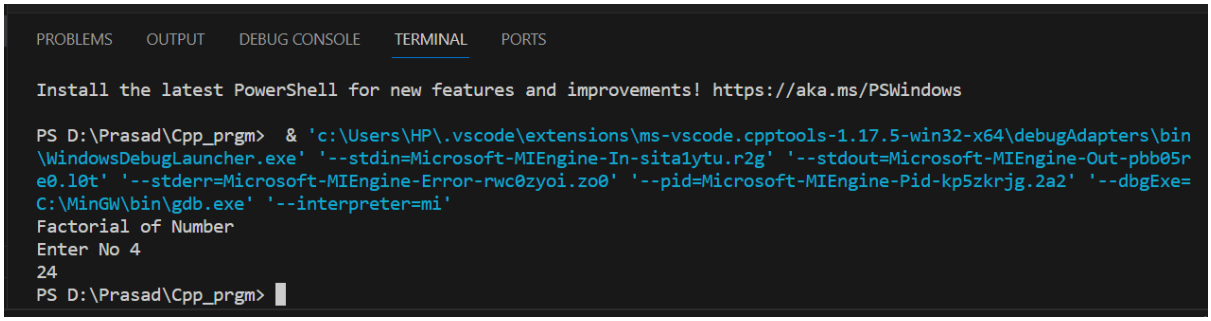
9.WAP to calculate factorial of a number.

Code:--

```
#include <iostream>
using namespace std;
int main()
{
int x,y,i;
y=1;
cout <<"Factorial of Number "<<"\n";
cout << "Enter No " ;
```

```
cin >> x;
for(i=1; i<=x; i++)
{
y = i*y;
}
cout << y;
}
```

Output:--



10.WAP to check whether a number is prime or not.

Code:--

```
#include <iostream>
using namespace std;
int main()
{
int x,i,flag;
cout << "Enter No = " ;
cin >> x;
for(i=2;i<x;i++)
{
if((x%i)==0)
{
flag = 1;
break;
}
else
flag = 0;
}
if(flag==1)
cout << "Not a Prime NO";
else
if(flag==0)
cout << "Prime No";
}
```

Output:--

```
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C:\MinGW\bin\gdb.exe' '--interpreter=mi'
Enter No = 20
Not a Prime NO
PS D:\Prasad\Cpp_prgm>  & 'c:\Users\HP\.vscode\extensions\ms-vscode.cpptools-1.17.5-win32-x64\debugAdapters\bin
\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-vcsrficd.sh5' '--stdout=Microsoft-MIEngine-Out-k1g2t3
z5.1qi' '--stderr=Microsoft-MIEngine-Error-ni3d3toy.yxq' '--pid=Microsoft-MIEngine-Pid-1pnlh2p1.1is' '--dbgExe=
C:\MinGW\bin\gdb.exe' '--interpreter=mi'
Enter No = 3
Prime No
PS D:\Prasad\Cpp_prgm>
```

11.WAP to print all digits of a number and their sum.

Code:--

```
#include <iostream>
using namespace std;
int main()
{
int x,y,z;
z = 0;
cout <<"Enter Number ";
cin >> x;
cout << "Different Digits are "<<"\n";
int i = 0;
while(x>0)
{
y = x%10;
x = x/10;
z = z+y;
cout << y << "\n";
i++ ;
}
cout << "Number of Digits are "<< i;
cout << "\n" << "Sum of Digits are "<< z<< "\n";
}
```

Output:--

```
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PS D:\Prasad\Cpp_prgm>  & 'c:\Users\HP\.vscode\extensions\ms-vscode.cpptools-1.17.5-win32-x64\debugAdapters\bin
\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-cptpu5es.beu' '--stdout=Microsoft-MIEngine-Out-d1rkwf
hp.qoz' '--stderr=Microsoft-MIEngine-Error-2orcfz3i.gys' '--pid=Microsoft-MIEngine-Pid-iesf3jn2.zut' '--dbgExe=
C:\MinGW\bin\gdb.exe' '--interpreter=mi'
Enter Number 240902
Different Digits are
2
0
9
0
4
2
Number of Digits are 6
Sum of Digits are 17
PS D:\Prasad\Cpp_prgm>
```

12.WAP to print reverse of a number.

Code:--

```
#include <iostream>
using namespace std;
int main()
{
int x,y;
cout <<"Enter a Number ";
cin >> x;
while(x>0)
{
y = x%10;
x = x/10;
cout << y ;
}
}
```

Output:--

13.WAP to check whether the number is Armstrong or not.

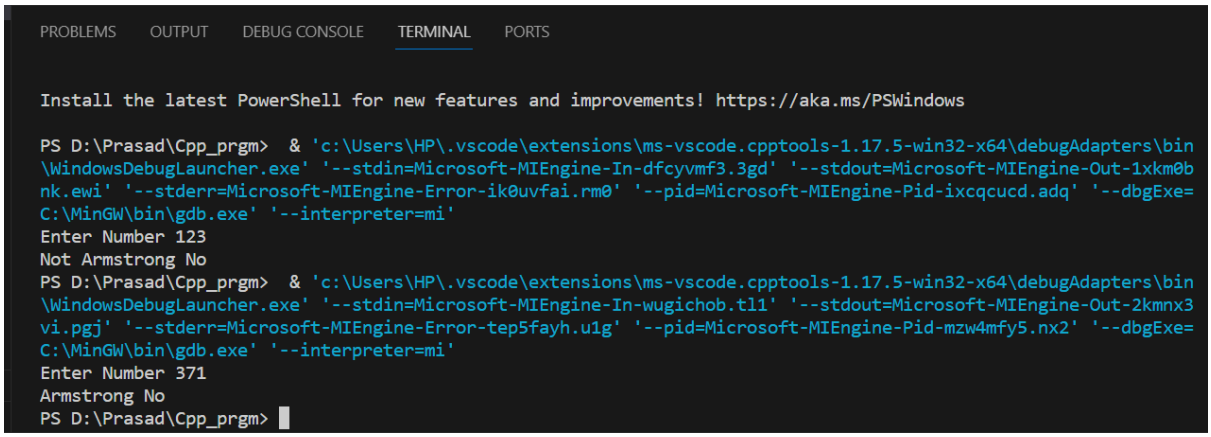
Code:--

```
#include <iostream>
using namespace std;
int main()
{
int x,y,z,a;
z = 0;
cout <<"Enter a Number ";
cin >> x;
a = x;
int i = 0;
while(x>0)
{
y = x%10;

x = x/10;
z = z+(y*y*y);
}
if(a==z)
```

```
cout << "Given No is a Armstrong No";
else
cout << "Given No is Not a Armstrong No";
}
```

Output:--



14.WAP to print the Fibonacci series in a given range.

Code:--

```
#include <iostream>
using namespace std;
int main()
{
int x,y,z,i;
int a,b,c;
a = 0;
b = 1;
z = 0;
cout <<"Write a Fibonacci Series for first n number = ";
cin >> x;
i=1;
cout<<" "<< a<<" "<< b;
while(i<=x)
{
c= b+a;
a = b;
b = c;
cout<<" "<< c <<" ";i++;
}
}
```

Output:--

```
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Windows PowerShell
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PS D:\Prasad\Cpp_prgm>  & 'c:\Users\HP\.vscode\extensions\ms-vscode.cpptools-1.17.5-win32-x64\debugAdapters\bin
\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-hfd0uw4t.cjb' '--stdout=Microsoft-MIEngine-Out-buvg53
1m.oas' '--stderr=Microsoft-MIEngine-Error-45mtr4s1.1gc' '--pid=Microsoft-MIEngine-Pid-vtyqioto.2at' '--dbgExe=
C:\MinGW\bin\gdb.exe' '--interpreter=mi'
Write a Fibonacci Series for first n number = 9
 0 1 1  2  3  5  8  13  21  34  55
PS D:\Prasad\Cpp_prgm>
```

15.WAP to check whether the number entered is palindrome or not.

Code:--

```
#include <iostream>
using namespace std;
int main()
{
int x,y,z;
z=0;
cout <<"Enter a Number ";
cin >> x;
int a = x;
while(x>0)
{
y = x%10;
x = x/10;
z = (z*10)+y;
}
if(a==z)
cout << "Given Number is a Palindrome Number";
else
cout << "Given Number is Not a Palindrome Number";
}
```

Output:--

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

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PS D:\Prasad\Cpp_prgm>  & 'c:\Users\HP\.vscode\extensions\ms-vscode.cpptools-1.17.5-win32-x64\debugAdapters\bin
\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-iisi23w0.4uv' '--stdout=Microsoft-MIEngine-Out-t3x3l2
ln.jas' '--stderr=Microsoft-MIEngine-Error-zpfbbrpc.om1' '--pid=Microsoft-MIEngine-Pid-tqen3o1i.icn' '--dbgExe=
C:\MinGW\bin\gdb.exe' '--interpreter=mi'
Enter a Number 240902
Given Number is Not a Palindrome Number
PS D:\Prasad\Cpp_prgm>  & 'c:\Users\HP\.vscode\extensions\ms-vscode.cpptools-1.17.5-win32-x64\debugAdapters\bin
\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-bwywpsts.pwx' '--stdout=Microsoft-MIEngine-Out-500bhy
5u.a0e' '--stderr=Microsoft-MIEngine-Error-fememvcf.vj4' '--pid=Microsoft-MIEngine-Pid-iz3pky5t.u1g' '--dbgExe=
C:\MinGW\bin\gdb.exe' '--interpreter=mi'
Enter a Number 23432
Given Number is a Palindrome Number
PS D:\Prasad\Cpp_prgm>
```