

# Assignment-1

## (Loops)

**Q1.** Print all the odd numbers from 1 to 100.

**Answer:**

```
1 #include <iostream>
2 using namespace std;
3 int main()
4 {
5     for(int i=1; i<=100; i++)
6     {
7         if(i%2 != 0) cout << i << " ";
8     }
9 }
```

```
PS C:\Users\Vanish\Desktop\Coding> cd "C:\Users\Vanish\Desktop\Coding\C++\Assignments\Assignment-3_Loops" ; if ($?) { g++ Answer1.cpp -o Answer1.exe ; if ($?) { .\Answer1.exe }
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73 75 77 79 81 83 85 87 89 91 93 95 97 99
PS C:\Users\Vanish\Desktop\Coding\C++\Assignments\Assignment-3_Loops>
```

**Q2.** Print all numbers from 1 to 100 that are divisible by 3.

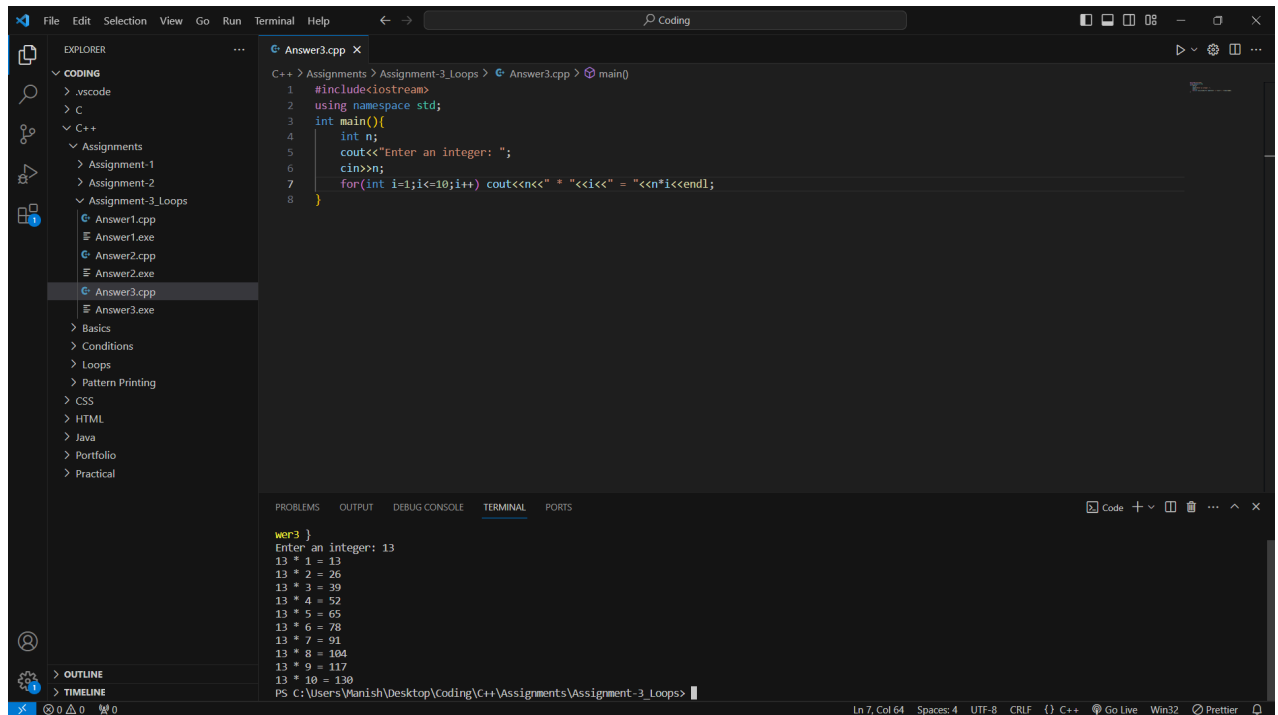
**Answer:**

```
1 #include <iostream>
2 using namespace std;
3 int main()
4 {
5     for(int i=1; i<=100; i++)
6     {
7         if(i%3 == 0) cout << i << " ";
8     }
9 }
```

```
PS C:\Users\Vanish\Desktop\Coding> cd "C:\Users\Vanish\Desktop\Coding\C++\Assignments\Assignment-3_Loops" ; if ($?) { g++ Answer2.cpp -o Answer2.exe ; if ($?) { .\Answer2.exe }
3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 48 51 54 57 60 63 66 69 72 75 78 81 84 87 90 93 96 99
PS C:\Users\Vanish\Desktop\Coding\C++\Assignments\Assignment-3_Loops>
```

**Q3.** Print the table of 'n'. Here 'n' is an integer which the user will input.

**Answer:**



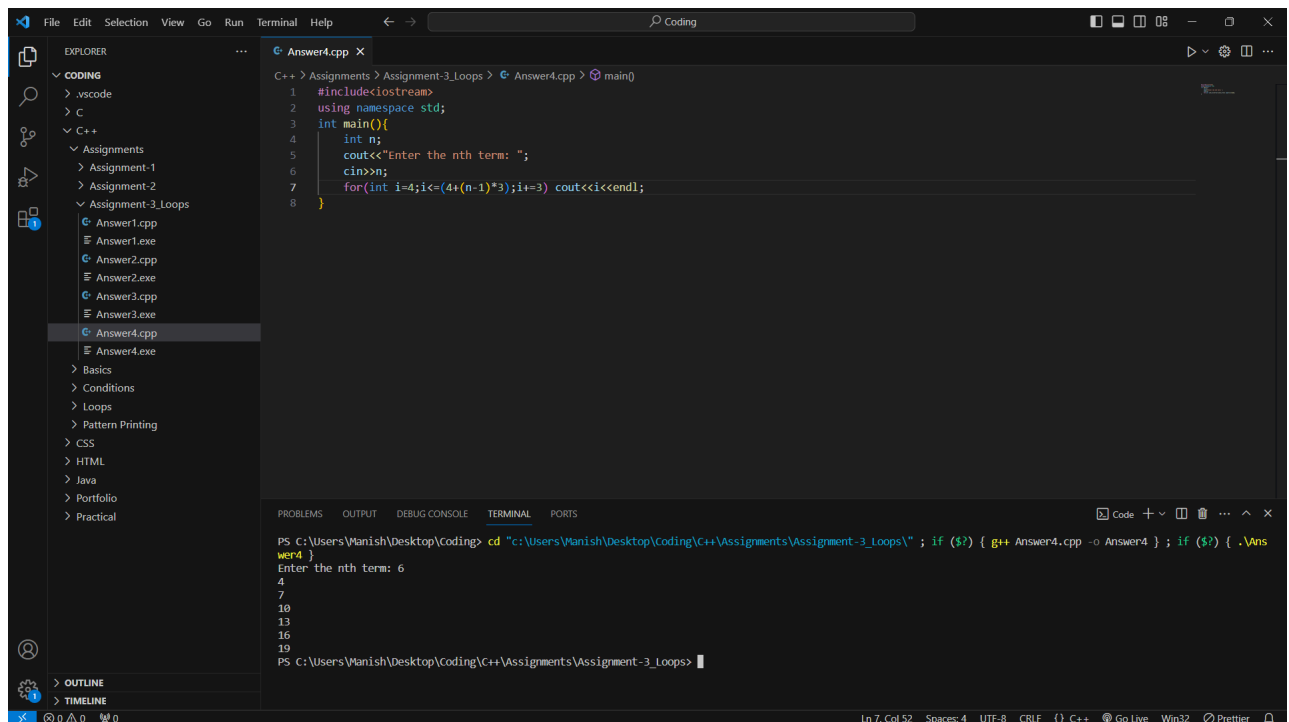
The screenshot shows a Visual Studio Code editor with a C++ file named `Answer3.cpp`. The code prompts the user to enter an integer `n` and then prints the multiplication table for `n` from 1 to 10. The terminal output shows the user entered 13, and the program printed the multiplication table for 13.

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4     int n;
5     cout<<"Enter an integer: ";
6     cin>>n;
7     for(int i=1;i<=10;i++) cout<<n<<" * "<<i<<" = "<<n*i<<endl;
8 }
```

```
wer3 }
Enter an integer: 13
13 * 1 = 13
13 * 2 = 26
13 * 3 = 39
13 * 4 = 52
13 * 5 = 65
13 * 6 = 78
13 * 7 = 91
13 * 8 = 104
13 * 9 = 117
13 * 10 = 130
PS C:\Users\Manish\Desktop\Coding\C++\Assignments\Assignment-3_Loops>
```

**Q4.** Display this AP - 4,7,10,13,16.. upto 'n' terms.

**Answer:**

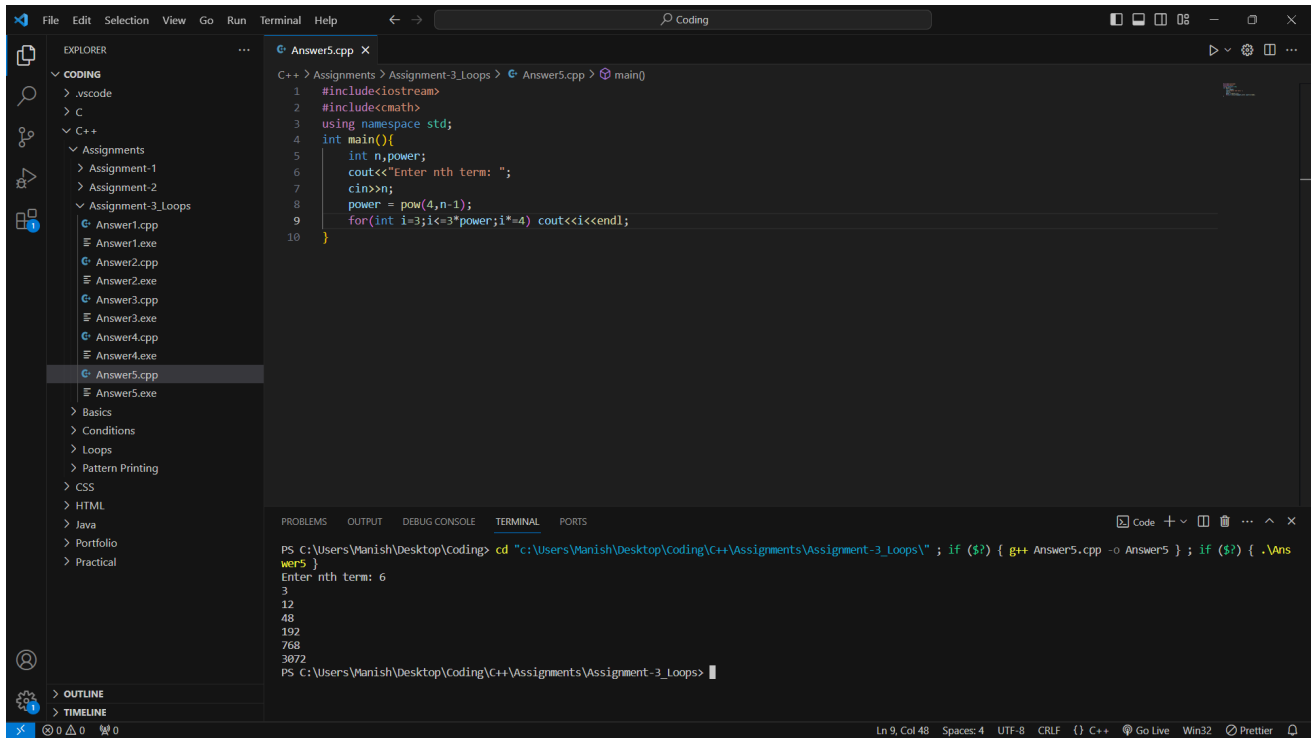


The screenshot shows a Visual Studio Code editor with a C++ file named `Answer4.cpp`. The code prompts the user to enter the `n`th term and then prints the terms of the arithmetic progression (AP) 4, 7, 10, 13, 16, ... up to `n` terms. The terminal output shows the user entered 6, and the program printed the first 6 terms of the AP: 4, 7, 10, 13, 16, 19.

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4     int n;
5     cout<<"Enter the nth term: ";
6     cin>>n;
7     for(int i=4;i<=(4+(n-1)*3);i+=3) cout<<i<<endl;
8 }
```

```
PS C:\Users\Manish\Desktop\Coding> cd "c:\Users\Manish\Desktop\Coding\C++\Assignments\Assignment-3_Loops\" ; if ($?) { g++ Answer4.cpp -o Answer4 } ; if ($?) { .\Ans
wer4 }
Enter the nth term: 6
4
7
10
13
16
19
PS C:\Users\Manish\Desktop\Coding\C++\Assignments\Assignment-3_Loops>
```

**Q5.** Display this GP – 3,12,48,... upto 'n' terms.

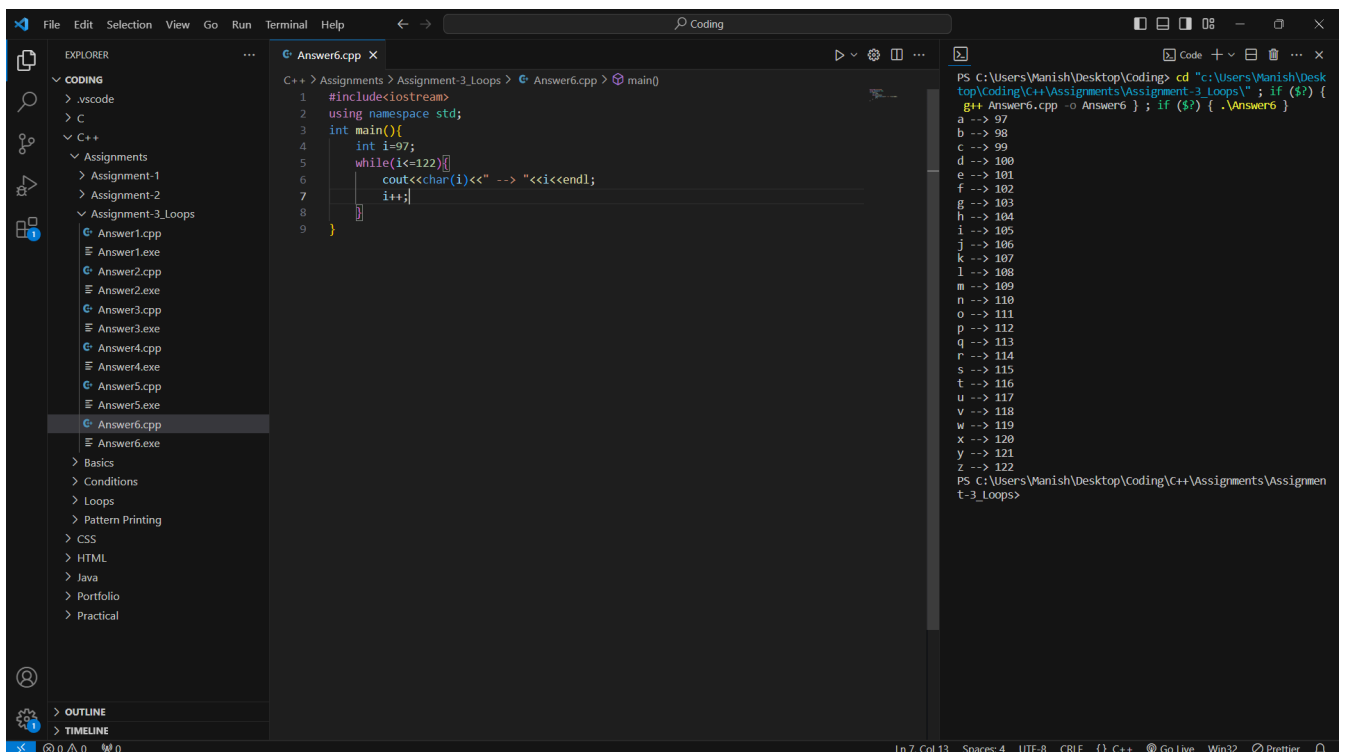


```
1 #include<iostream>
2 #include<cmath>
3 using namespace std;
4 int main(){
5     int n,power;
6     cout<<"Enter nth term: ";
7     cin>>n;
8     power = pow(4,n-1);
9     for(int i=3;i<=3*power;i*=4) cout<<i<<endl;
10 }
```

```
PS C:\Users\Manish\Desktop\Coding> cd "C:\Users\Manish\Desktop\Coding\C++\Assignments\Assignment-3_Loops"; if ($?) { g++ Answer5.cpp -o Answer5 }; if ($?) { .\Answer5 }
Enter nth term: 6
3
12
48
192
768
3072
PS C:\Users\Manish\Desktop\Coding\C++\Assignments\Assignment-3_Loops>
```

**Q6.** Write a program to print all the ASCII values and their equivalent characters of 26 alphabets using a while loop.

**Answer:**



```
1 #include<iostream>
2 using namespace std;
3 int main(){
4     int i=97;
5     while(i<=122){
6         cout<<char(i)<<" --> "<<i<<endl;
7         i++;
8     }
9 }
```

```
PS C:\Users\Manish\Desktop\Coding> cd "C:\Users\Manish\Desktop\Coding\C++\Assignments\Assignment-3_Loops"; if ($?) { g++ Answer6.cpp -o Answer6 }; if ($?) { .\Answer6 }
a --> 97
b --> 98
c --> 99
d --> 100
e --> 101
f --> 102
g --> 103
h --> 104
i --> 105
j --> 106
k --> 107
l --> 108
m --> 109
n --> 110
o --> 111
p --> 112
q --> 113
r --> 114
s --> 115
t --> 116
u --> 117
v --> 118
w --> 119
x --> 120
y --> 121
z --> 122
PS C:\Users\Manish\Desktop\Coding\C++\Assignments\Assignment-3_Loops>
```