

Bahria University,

Karachi Campus



Bahria University
Discovering Knowledge

COURSE: CSC -113 Computing Programming lab
TERM: SPRING 2020, CLASS: BCE- 2A

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COMPUTING PROGRAMMING LAB

Question 1:

Write a nested if statement to print the appropriate activity depending on the value of a variable temperature and humidity as in the table below: Assume that the temperature can only be warm and cold, and the humidity can only be dry and humid.

PROGRAM:

```
9  #include <iostream>
10 using namespace std;
11 int main()
12 {
13     string humidity, temprature;
14     cout<<" Enter temprature: "<<endl;
15     cin>>temprature;
16     cout<<" Enter humodity: "<<endl;
17     cin>>humidity;
18     if(temprature == "warm")
19     {if (humidity == "dry")
20     { cout<<" play tennis";}
21     if (humidity=="hot")
22     {cout<<"swim";
23     }
24     }
25     if (temprature == "cold"){
26     if (humidity == "dry")
27     {cout<<"play basketball";
28     }
29     if (humidity == "hot")
30     {cout<<"watch tv ";
31     }
32     }
33     return 0;
```

warm
Enter humodity:
dry
play tennis
...Program finished with exit code 0
Press ENTER to exit console.

Question 2:

Generate Stars using nested for loops

```
*
**
***
****
*****
*****
```

PROGRAM:

```

9  #include <iostream>
10 using namespace std;
11 int main()
12 {
13     int n=10,i,j;
14     for(i=0;i<=10;i++)
15     {
16         for(j=0;j<=i;j++)
17         {
18             cout<<"*";
19         }
20         cout<<endl;
21     }
22     return 0;
23 }

```

input

```

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

```

Question 3:

Generate Stars using nested for loops

```

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

```

PROGRAM:

C++	Dark	Light	C++	Output
<pre> 1 #include <iostream> 2 3 using namespace std; 4 5 int 6 main () 7 { 8 int raw = 5, i, j; 9 for (i = 4; i >= 0; i--) 10 { 11 for (int spaces = 0; spaces < raw - i; ++spaces) 12 { 13 cout << " "; 14 } 15 16 for (j = 0; j <= i; j++) 17 { 18 cout << "* "; 19 } 20 cout << endl; 21 } 22 return 0; 23 } 24 </pre>				<pre> * * * * * * * * * * * * * * * </pre>

Question 4:

Generate stars using nested for loop?

```
*****  
  
*****  
  
*****  
  
*****  
  
*****  
  
*****  
  
****  
  
***  
  
**  
  
*
```

PROGRAM:

```
9  #include <iostream>  
10 using namespace std;  
11 int main()  
12 {  
13     int n=10,i,j;  
14     for(i=10;i>=1;i--)  
15     {  
16         for(j=1 ; j<=i ; j++)  
17         {  
18             cout<<"*";  
19         }  
20         cout<<endl;  
21     }  
22     return 0;  
23 }
```

input

```
*****  
*****  
*****  
*****  
*****  
*****  
*****  
****  
***  
**  
*  
  
...Program finished with exit code 0  
Press ENTER to exit console.
```

Question 5:

Generate Stars using nested for loops

```
*  
  
* *  
  
* * *  
  
* * * *  
  
* * * * *
```

PROGRAM:

```
1 #include <iostream>  
2 using namespace std;  
3 int main ()  
4 {  
5     int raw = 5, i, j;  
6     for (i = 0; i <= 4; i++)  
7     {  
8         for (int spaces = 1; spaces <= raw - i; ++spaces)  
9         {  
10             cout << " ";  
11         }  
12         for (j = 0; j <= i; j++)  
13         {  
14             cout << "* ";  
15         }  
16         cout << endl;  
17     }  
18     return 0;  
19 }
```

input

```
*  
* *  
* * *  
* * * *  
* * * * *
```

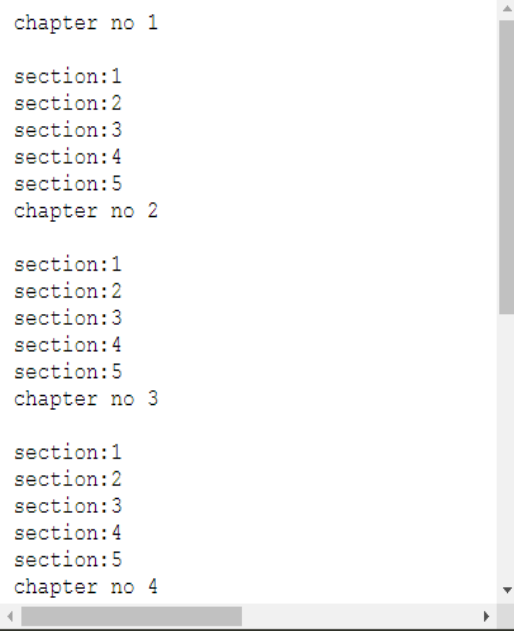
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Question 6:

Write a program using nested loop print chap 1 to chap 5 each chapter contain 5 section.

PROGRAM:

```
1 #include <iostream>
2
3 using namespace std;
4
5 int main()
6 {
7     int section,chap;
8     for(chap=1;chap<=5;chap++)
9     {cout<<"chapter no "<<chap<<endl<<endl;
10      for(int section=1;section<=5;section++)
11      {cout <<"section:"<<section<<endl;}}
12     return 0;
13 }
```

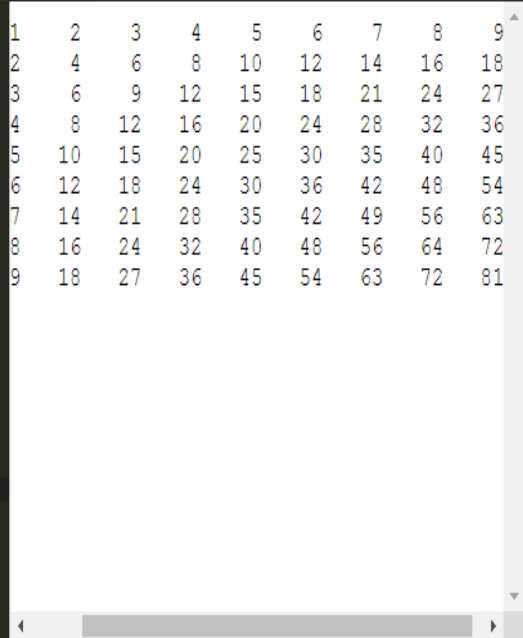


Question 7:

Print the time table of 1 to 9 using nested loop.(hint: you need to use an if-else statement to check whether the product is single-digit or double-digit)and print an additional space if needed.

PROGRAM:

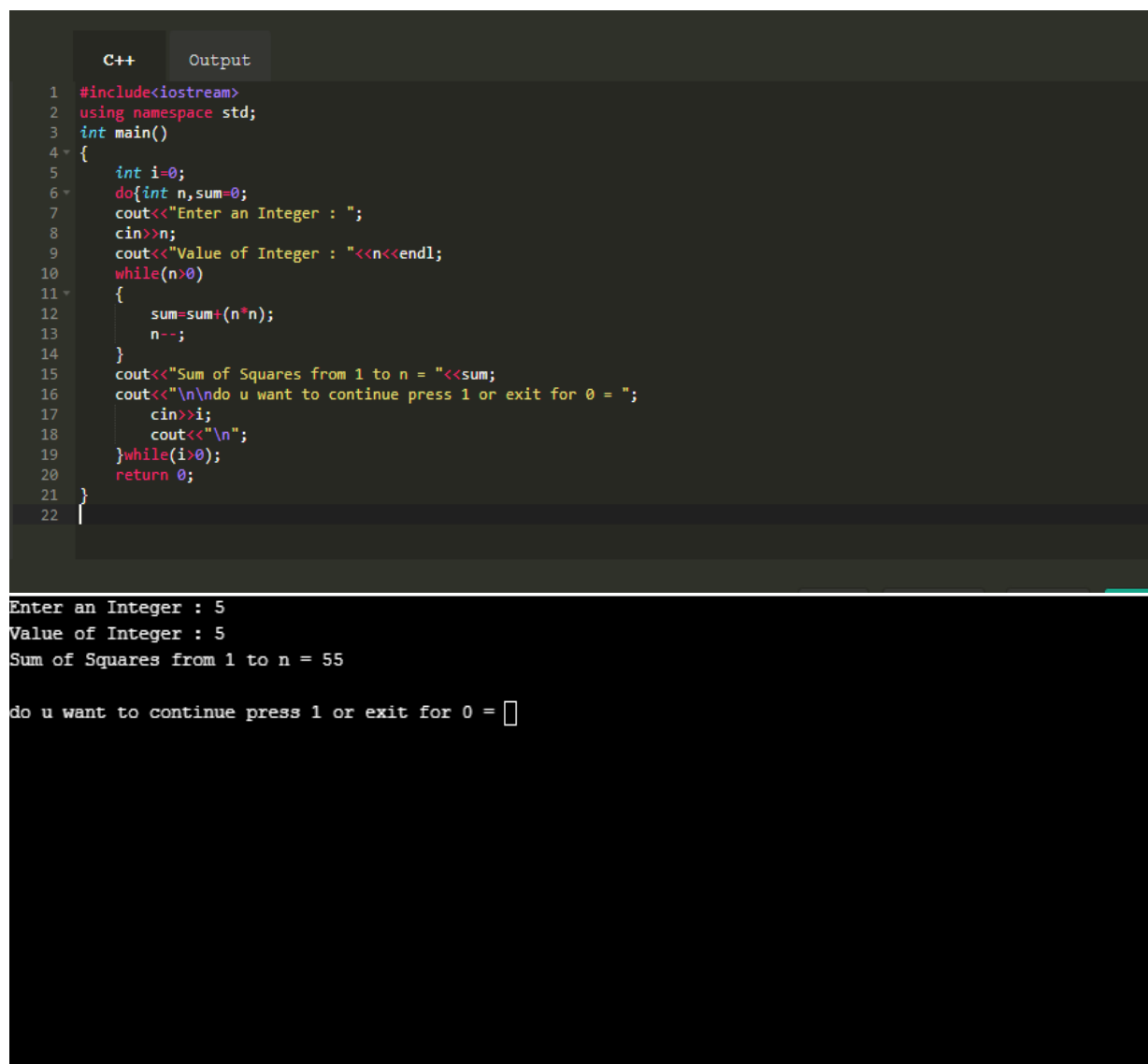
```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     for(int i=1;i<=9;i++)
6     {
7         for(int j=1;j<=9;j++)
8         {
9             if(i*j<=9)
10             {
11                 cout<<" "<<i*j;
12             }
13             else if(i*j>9)
14             {
15                 cout<<" "<<i*j;
16             }
17         }
18         cout<<"\n";
19     }
20     return 0;
21 }
```



Question 8:

Write a program that inputs an integer larger than 1 and calculates the sum of squares from 1 to that integer. For example, if the integer equals 4, the sum of squares is 30 (1+4+9+16). The output should be the value of the integer and the sum, properly labeled. Continue the program till the user enters a value less than 1 which signals the end of the program. Use a do While statement.

PROGRAM:



The screenshot shows a C++ IDE with two tabs: 'C++' and 'Output'. The 'C++' tab contains the following code:

```
1 #include<iostream>
2 using namespace std;
3 int main()
4 {
5     int i=0;
6     do{int n,sum=0;
7         cout<<"Enter an Integer : ";
8         cin>>n;
9         cout<<"Value of Integer : "<<n<<endl;
10        while(n>0)
11        {
12            sum=sum+(n*n);
13            n--;
14        }
15        cout<<"Sum of Squares from 1 to n = "<<sum;
16        cout<<"\n\ndo u want to continue press 1 or exit for 0 = ";
17        cin>>i;
18        cout<<"\n";
19    }while(i>0);
20    return 0;
21 }
22 |
```

The 'Output' tab shows the following text:

```
Enter an Integer : 5
Value of Integer : 5
Sum of Squares from 1 to n = 55
do u want to continue press 1 or exit for 0 = 
```

Question 9:

Write a program that takes an integer value and decide if it is even or odd. Continue asking for numbers till the user enters a negative value. The program then displays the total number of even and odd integers given. Use do While statement.

PROGRAM:

```
1  #include<iostream>
2  using namespace std;
3  int main()
4  {
5      int n,i=0,j=0;
6      do
7      {
8          cout<<"Enter number =";
9          cin>>n;
10         if(n%2==0)
11         {
12             cout<<"Even number"<<endl;
13             i+=1;
14         }
15         else if(n%2==1)
16         {
17             cout<<"Odd Number"<<endl;
18             j+=1;
19         }
20         cout<<"\n";
21     }while(n>0);
22     cout<<"Total Even numbers= "<<i<<endl;
23     cout<<"Total odd numbers= "<<j<<endl;
24     return 0;
25 }
```


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```
Enter number =3
Odd Number

Enter number =2
Even number

Enter number =0
Even number

Total Even numbers= 2
Total odd numbers= 1

...Program finished with exit code 0
Press ENTER to exit console.█
```