

Department of Artificial Intelligence and Multimedia Gaming
Fundamentals of Programming
(Fall-2025)

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Section: D

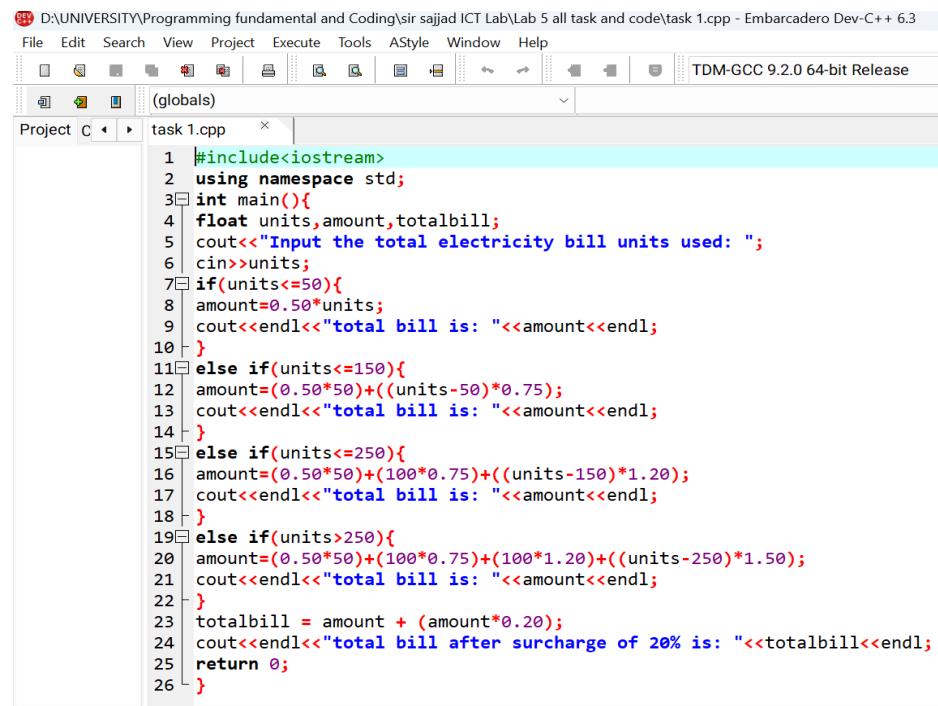
Sap Id: 5000001141

LAB No. 06

LECTURER: SAJJAD ALI RAJPER

Task 1:

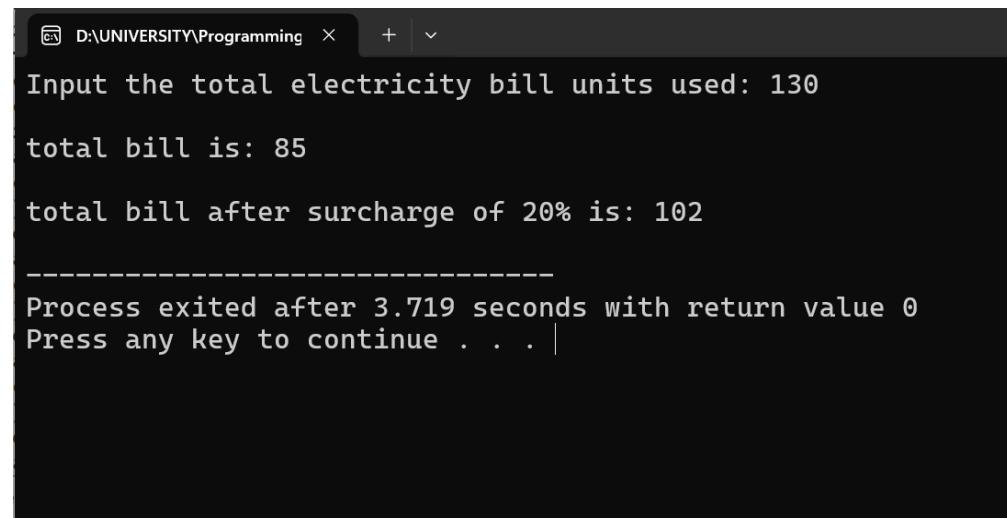
Code:



The screenshot shows the Embarcadero Dev-C++ IDE interface. The menu bar includes File, Edit, Search, View, Project, Execute, Tools, AStyle, Window, and Help. The toolbar has icons for file operations like Open, Save, and Build. The status bar at the bottom right says "TDM-GCC 9.2.0 64-bit Release". The code editor window displays "task 1.cpp" with the following C++ code:

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4     float units,amount,totalbill;
5     cout<<"Input the total electricity bill units used: ";
6     cin>>units;
7     if(units<=50){
8         amount=0.50*units;
9         cout<<endl<<"total bill is: "<<amount<<endl;
10    }
11   else if(units<=150){
12       amount=(0.50*50)+((units-50)*0.75);
13       cout<<endl<<"total bill is: "<<amount<<endl;
14   }
15   else if(units<=250){
16       amount=(0.50*50)+(100*0.75)+((units-150)*1.20);
17       cout<<endl<<"total bill is: "<<amount<<endl;
18   }
19   else if(units>250){
20       amount=(0.50*50)+(100*0.75)+(100*1.20)+((units-250)*1.50);
21       cout<<endl<<"total bill is: "<<amount<<endl;
22   }
23   totalbill = amount + (amount*0.20);
24   cout<<endl<<"total bill after surcharge of 20% is: "<<totalbill<<endl;
25   return 0;
26 }
```

Output:

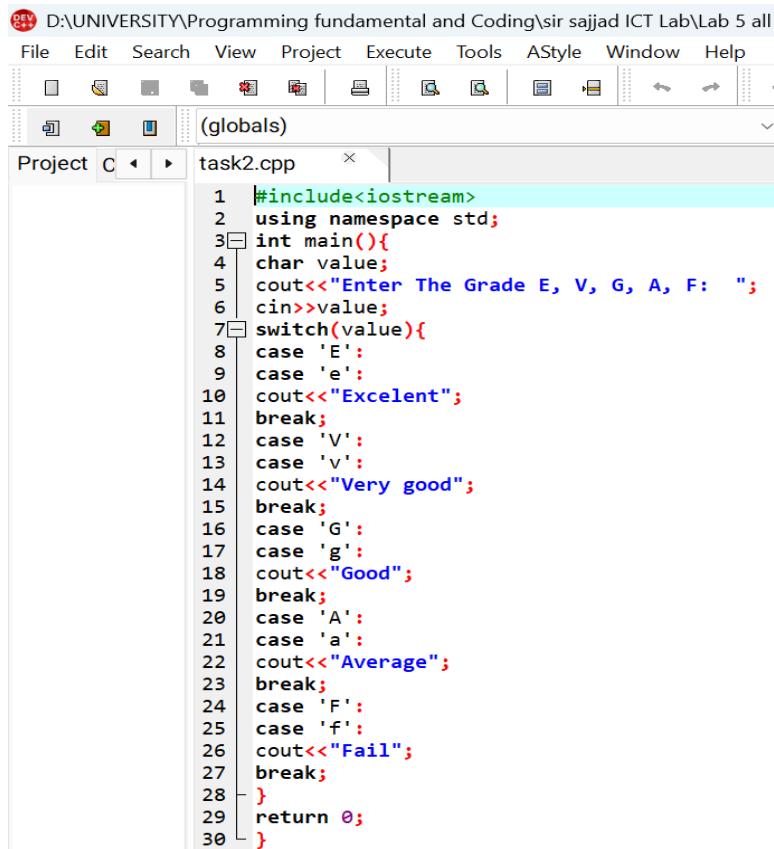


The screenshot shows a terminal window with the following output:

```
D:\UNIVERSITY\Programming > Input the total electricity bill units used: 130
total bill is: 85
total bill after surcharge of 20% is: 102
-----
Process exited after 3.719 seconds with return value 0
Press any key to continue . . . |
```

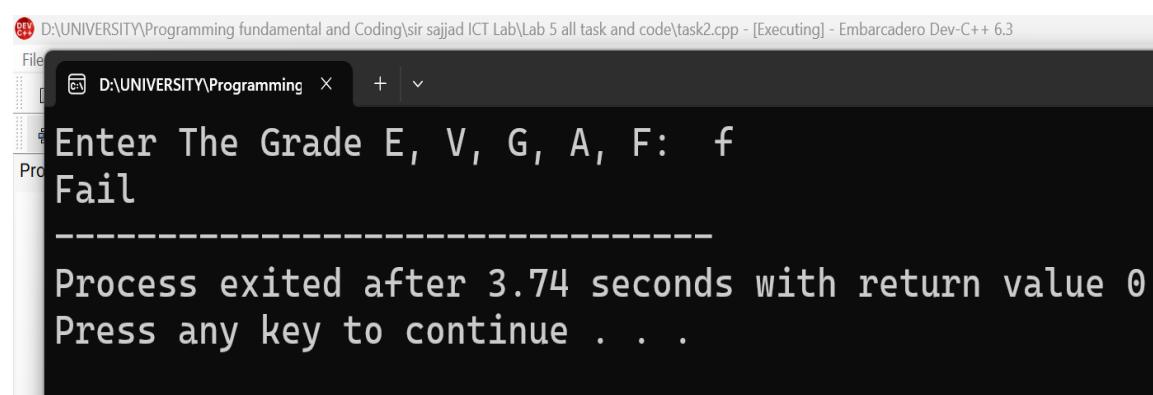
Task 2:

Code:



```
#include<iostream>
using namespace std;
int main(){
    char value;
    cout<<"Enter The Grade E, V, G, A, F:  ";
    cin>>value;
    switch(value){
        case 'E':
        case 'e':
            cout<<"Excelent";
            break;
        case 'V':
        case 'v':
            cout<<"Very good";
            break;
        case 'G':
        case 'g':
            cout<<"Good";
            break;
        case 'A':
        case 'a':
            cout<<"Average";
            break;
        case 'F':
        case 'f':
            cout<<"Fail";
            break;
    }
    return 0;
}
```

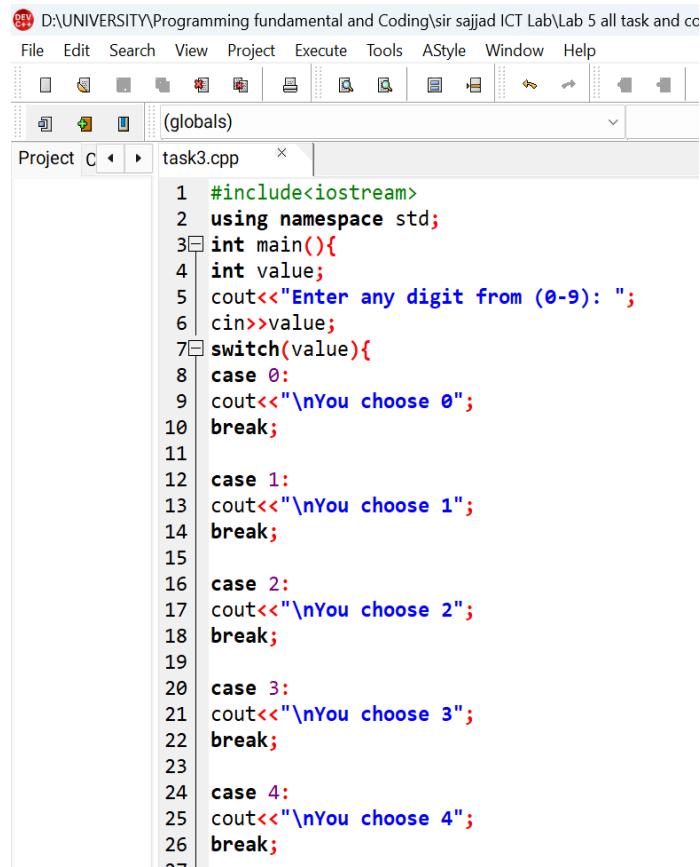
Output:



```
D:\UNIVERSITY\Programming fundamental and Coding\sir sajjad ICT Lab\Lab 5 all task and code\task2.cpp - [Executing] - Embarcadero Dev-C++ 6.3
File D:\UNIVERSITY\Programming X + v
Enter The Grade E, V, G, A, F:  f
Fail
-----
Process exited after 3.74 seconds with return value 0
Press any key to continue . . .
```

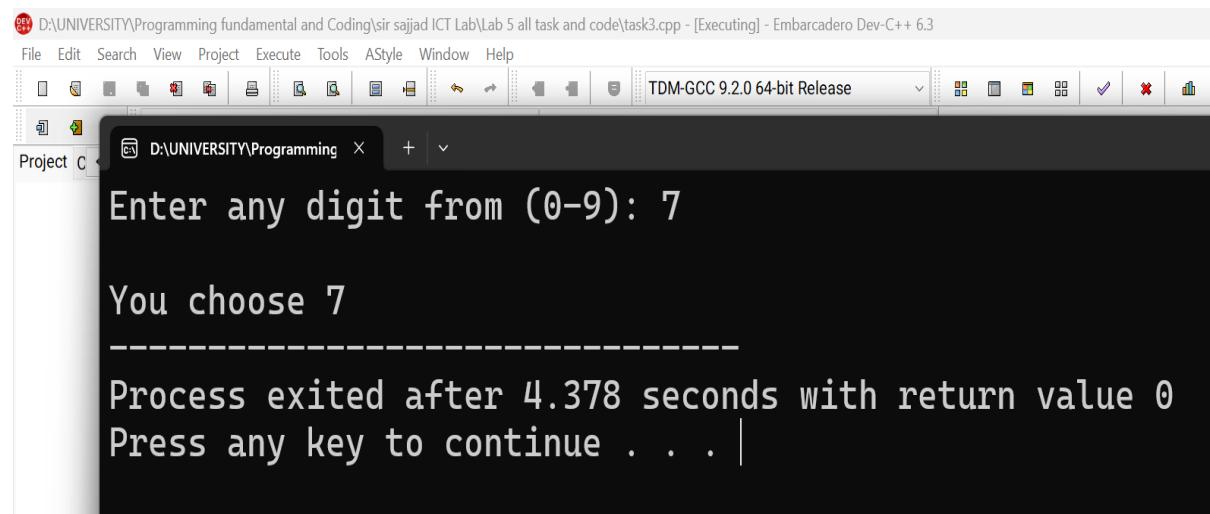
Task 3:

Code:



```
D:\UNIVERSITY\Programming fundamental and Coding\sir sajjad ICT Lab\Lab 5 all task and code
File Edit Search View Project Execute Tools AStyle Window Help
Project C task3.cpp
1 #include<iostream>
2 using namespace std;
3 int main(){
4     int value;
5     cout<<"Enter any digit from (0-9): ";
6     cin>>value;
7     switch(value){
8         case 0:
9             cout<<"\nYou choose 0";
10            break;
11        case 1:
12            cout<<"\nYou choose 1";
13            break;
14        case 2:
15            cout<<"\nYou choose 2";
16            break;
17        case 3:
18            cout<<"\nYou choose 3";
19            break;
20        case 4:
21            cout<<"\nYou choose 4";
22            break;
23    }
24 }
```

Output:



```
D:\UNIVERSITY\Programming fundamental and Coding\sir sajjad ICT Lab\Lab 5 all task and code\task3.cpp - [Executing] - Embarcadero Dev-C++ 6.3
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 9.2.0 64-bit Release
D:\UNIVERSITY\Programming
Enter any digit from (0-9): 7

You choose 7
-----
Process exited after 4.378 seconds with return value 0
Press any key to continue . . .
```

Task 4

Code:

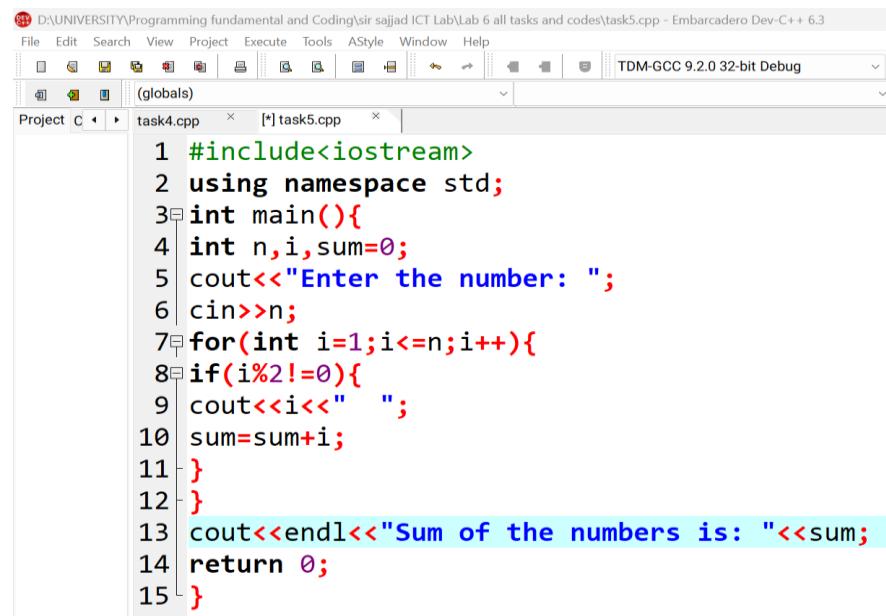
```
[*] task4.cpp  × |  
1 #include<iostream>  
2 using namespace std;  
3 int main(){  
4     int n;  
5     cout<<"Enter the number: ";  
6     cin>>n;  
7     for(int i=1;i<=n;i++){  
8         cout<<i<<" ";  
9     }  
10    return 0;  
11 }
```

Output:

```
NIVERSITY\Programming fundamental and Coding\sir sajjad ICT Lab\Lab 6 all tasks and codes\task4.cpp - [Executing] - Embarcadero Dev-C++ 6.3  
dit Search View Project Execute Tools AStyle Window Help  
D:\NIVERSITY\Programming × + v - □ ×  
Enter the number: 20  
1      2      3      4      5      6      7      8      9      10     11     12     13     14     15     1  
6      17     18     19     20  
-----  
Process exited after 6.733 seconds with return value 0  
Press any key to continue . . .
```

Task 5

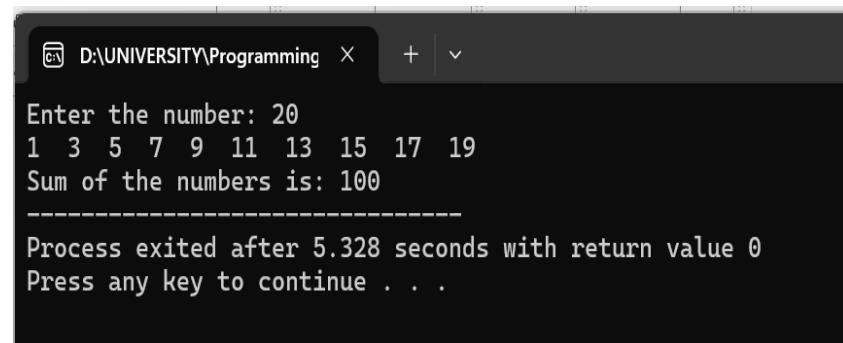
Code:



The screenshot shows the Embarcadero Dev-C++ IDE interface. The menu bar includes File, Edit, Search, View, Project, Execute, Tools, AStyle, Window, and Help. The toolbar has various icons for file operations. The title bar displays the path D:\UNIVERSITY\Programming fundamental and Coding\sir sajjad ICT Lab\Lab 6 all tasks and codes\task5.cpp - Embarcadero Dev-C++ 6.3. The status bar at the bottom shows line numbers from 1 to 15. The code editor contains the following C++ code:

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4     int n,i,sum=0;
5     cout<<"Enter the number: ";
6     cin>>n;
7     for(int i=1;i<=n;i++){
8         if(i%2!=0){
9             cout<<i<<" ";
10            sum=sum+i;
11        }
12    }
13    cout<<endl<<"Sum of the numbers is: "<<sum;
14    return 0;
15 }
```

Output:

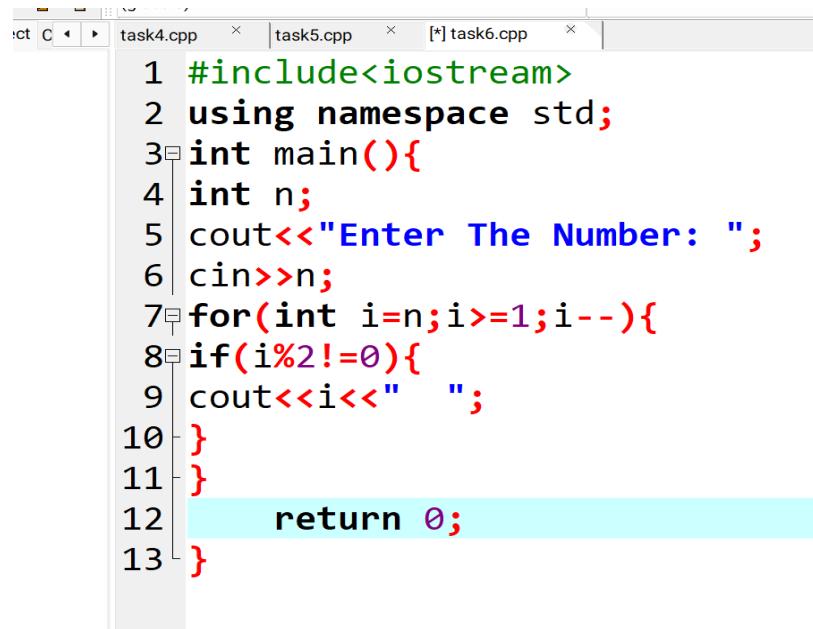


The screenshot shows a terminal window with a black background and white text. The window title is D:\UNIVERSITY\Programming. The output shows the program's execution:

```
Enter the number: 20
1 3 5 7 9 11 13 15 17 19
Sum of the numbers is: 100
-----
Process exited after 5.328 seconds with return value 0
Press any key to continue . . .
```

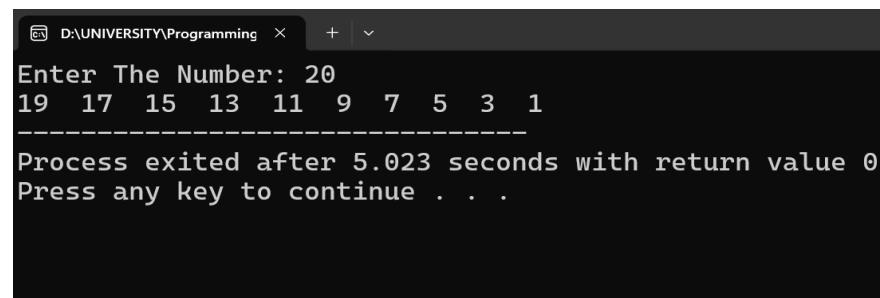
Task 6

Code:



```
task C < > task4.cpp x task5.cpp x [*] task6.cpp x
1 #include<iostream>
2 using namespace std;
3 int main(){
4     int n;
5     cout<<"Enter The Number: ";
6     cin>>n;
7     for(int i=n;i>=1;i--){
8         if(i%2!=0){
9             cout<<i<<" ";
10    }
11 }
12     return 0;
13 }
```

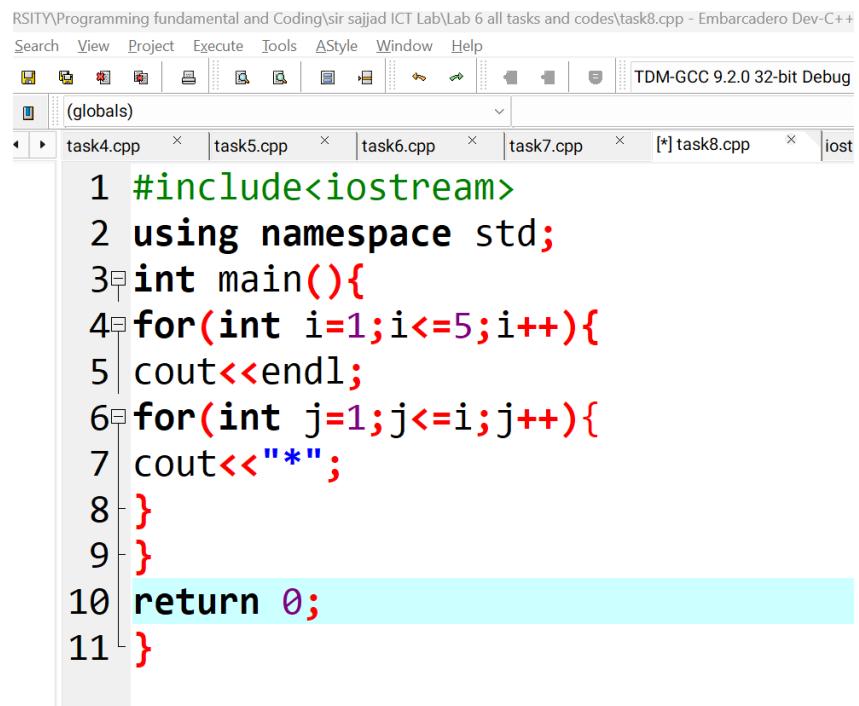
Output:



```
D:\UNIVERSITY\Programming x + v
Enter The Number: 20
19 17 15 13 11 9 7 5 3 1
-----
Process exited after 5.023 seconds with return value 0
Press any key to continue . . .
```

Task 8

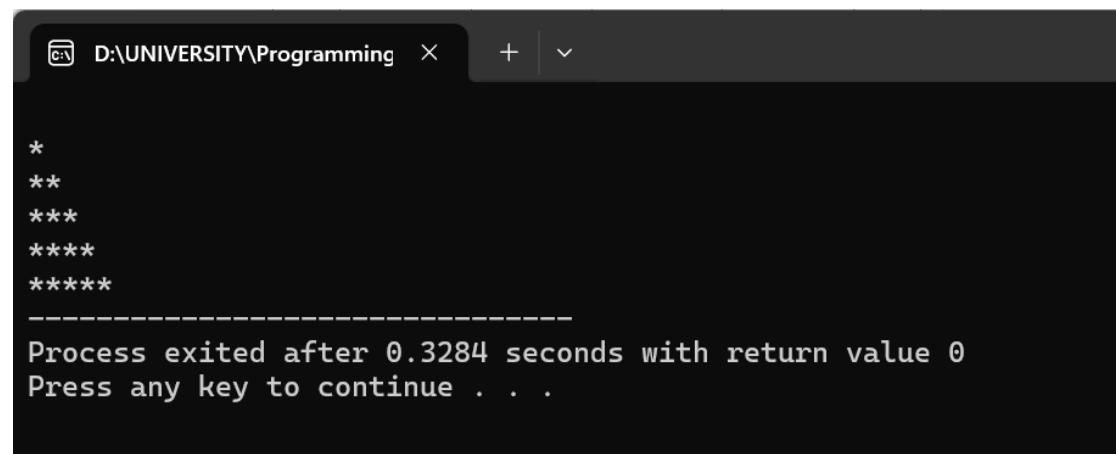
Code:



The screenshot shows the Embarcadero Dev-C++ IDE interface. The title bar reads "RSITY\Programming fundamental and Coding\sir sajjad ICT Lab\Lab 6 all tasks and codes\task8.cpp - Embarcadero Dev-C++". The menu bar includes Search, View, Project, Execute, Tools, AStyle, Window, and Help. The toolbar has various icons for file operations. The status bar at the bottom says "TDM-GCC 9.2.0 32-bit Debug". The code editor window displays the following C++ code:

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4     for(int i=1;i<=5;i++){
5         cout<<endl;
6         for(int j=1;j<=i;j++){
7             cout<<"*";
8         }
9     }
10    return 0;
11 }
```

Output:



The screenshot shows a terminal window with the path "D:\UNIVERSITY\Programming" in the title bar. The window displays the following output:

```
*  
**  
***  
****  
*****  
-----  
Process exited after 0.3284 seconds with return value 0  
Press any key to continue . . .
```