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(SE)**

EXAMINATION: LAP PAPER

QNo1: Read A, B and C representing the three sides of a triangle. Write a program to find out its area the formula is given below:

$$\text{Area} = \sqrt{S(S - A)(S - B)(S - C)}$$

$$\text{Where } S = \frac{A+B+C}{2}$$

Answer: **Code:**

```
#include<iostream>

#include<math.h>

using namespace std;

int main(){

    float A,B,C,S,Area;

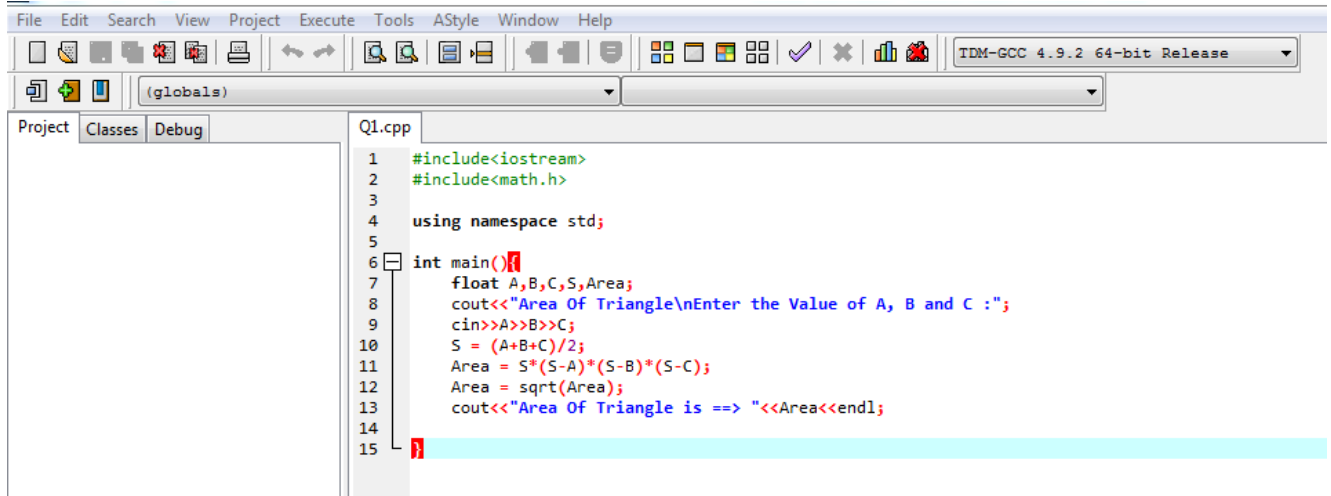
    cout<<"Area Of Triangle\nEnter the Value of A, B and C :";

    cin>>A>>B>>C;

    S = (A+B+C)/2;

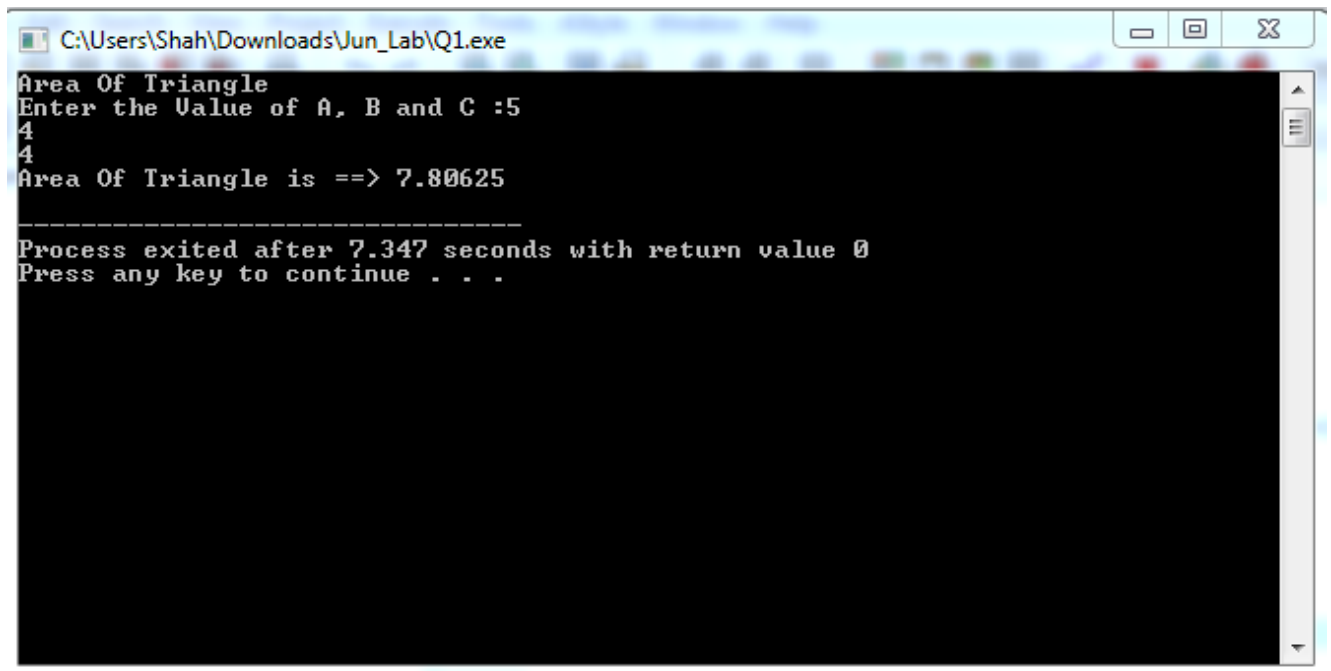
    Area = S*(S-A)*(S-B)*(S-C);
```

```
Area = sqrt(Area);  
cout<<"Area Of Triangle is ==> "<<Area<<endl;  
  
}
```



```
1 #include<iostream>  
2 #include<math.h>  
3  
4 using namespace std;  
5  
6 int main()  
7 {  
8     float A,B,C,S,Area;  
9     cout<<"Area Of Triangle\nEnter the Value of A, B and C :";  
10    cin>>A>>B>>C;  
11    S = (A+B+C)/2;  
12    Area = S*(S-A)*(S-B)*(S-C);  
13    Area = sqrt(Area);  
14    cout<<"Area Of Triangle is ==> "<<Area<<endl;  
15 }
```

OUT PUT:



```
C:\Users\Shah\Downloads\Jun_Lab\Q1.exe  
Area Of Triangle  
Enter the Value of A, B and C :5  
4  
4  
Area Of Triangle is ==> 7.80625  
-----  
Process exited after 7.347 seconds with return value 0  
Press any key to continue . . .
```

The area of triangle is 7.80625.

QNo2: Write a C++ program to get marks obtained by a student in percentage **P** and then find the division according to the below rules:

- If Percentage P is above or equal to 60 then display.....1st Division.
- If Percentage P is between 50 & 59 then display.....2nd Division.
- If Percentage P is between 40 & 49 then display.....3rd Division.
- If Percentage P is less than 40 then display.....Fail.

Answer: **Code:**

```
#include <iostream>
using namespace std;

int main()
{
    float percent;
    cout<<"Enter your percentage: ";
    cin>>percent;
    if (percent>=60)
    {
        cout<<"You have passed with first division";
    }
    else if (percent>=50)
    {
        cout<<"You have passed with second division";
    }
    else if (percent>=40)
    {
        cout<<"You have passed with third division";
    }
    else
    {
        cout<<"Sorry: You have failed";
    }

    return 0;
}
```

```
1 #include <iostream>
2 using namespace std;
3
4 int main()
5 {
6     float percent;
7     cout<<"Enter your percentage: ";
8     cin>>percent;
9     if (percent>=60)
10    {
11        cout<<"You have passed with first division";
12    }
13    else if (percent>=50)
14    {
15        cout<<"You have passed with second division";
16    }
17    else if (percent>=40)
18    {
19        cout<<"You have passed with third division";
20    }
21    else
22    {
23        cout<<"Sorry: You have failed";
24    }
25
26    return 0;
27 }
```

OUT PUT:

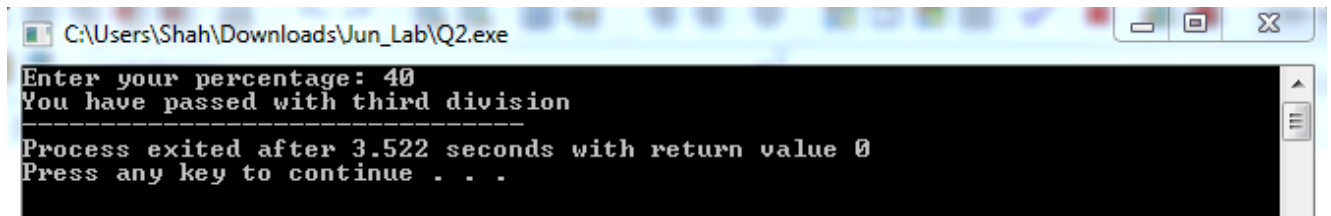
If percentage is 60:

```
C:\Users\Shah\Downloads\Jun_Lab\Q2.exe
Enter your percentage: 60
You have passed with first division
-----
Process exited after 8.402 seconds with return value 0
Press any key to continue . . .
```

If percentage is 50:

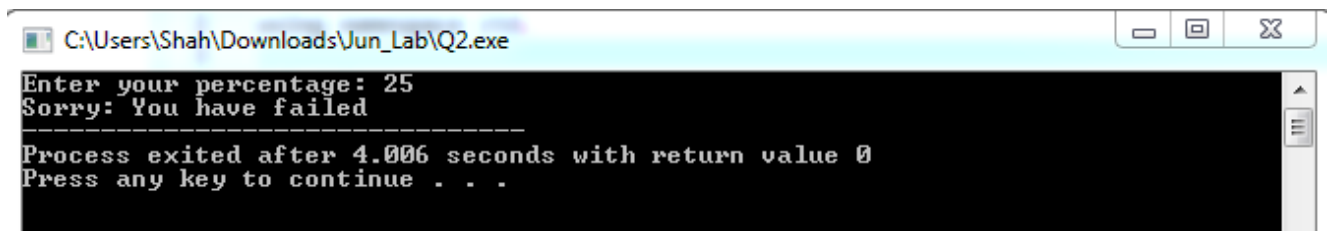
```
C:\Users\Shah\Downloads\Jun_Lab\Q2.exe
Enter your percentage: 50
You have passed with second division
-----
Process exited after 2.604 seconds with return value 0
Press any key to continue . . .
```

If percentage is 40:



```
C:\Users\Shah\Downloads\Jun_Lab\Q2.exe
Enter your percentage: 40
You have passed with third division
-----
Process exited after 3.522 seconds with return value 0
Press any key to continue . . .
```

If percentage is 25:



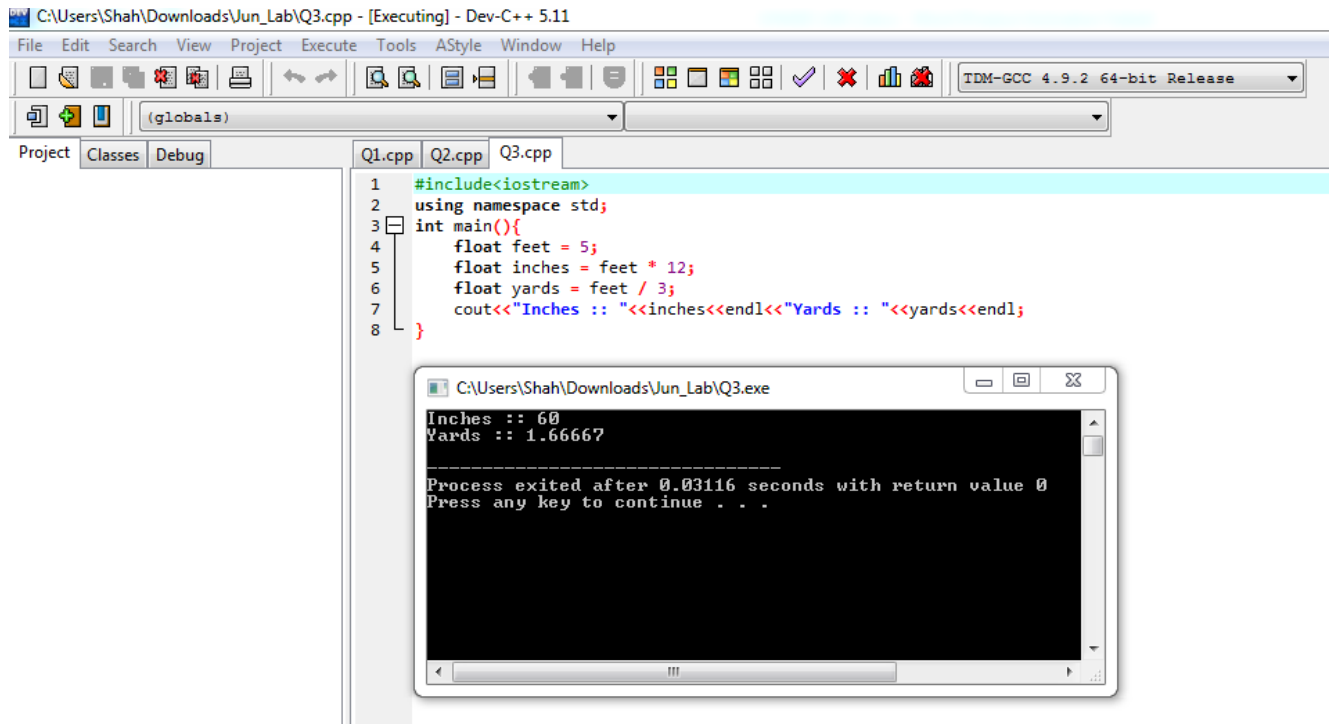
```
C:\Users\Shah\Downloads\Jun_Lab\Q2.exe
Enter your percentage: 25
Sorry: You have failed
-----
Process exited after 4.006 seconds with return value 0
Press any key to continue . . .
```

QNo3: Write a C++ program to convert 5 feet to the equivalent number of (a) Inches (b) Yards. Where 1foot =12 Inches and 1 yard=3 feet).

Answer: **Code:**

```
#include<iostream>
using namespace std;
int main(){
    float feet = 5;
    float inches = feet * 12;
    float yards = feet / 3;
    cout<<"Inches :: "<<inches<<endl<<"Yards :: 
"<<yards<<endl;
}
```

CODE & OUT PUT:



The screenshot shows a Dev-C++ 5.11 IDE window titled "C:\Users\Shah\Downloads\Jun_Lab\Q3.cpp - [Executing] - Dev-C++ 5.11". The code in the editor is as follows:

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4     float feet = 5;
5     float inches = feet * 12;
6     float yards = feet / 3;
7     cout<<"Inches :: "<<inches<<endl<<"Yards :: "<<yards<<endl;
8 }
```

The output window shows the following text:

```
C:\Users\Shah\Downloads\Jun_Lab\Q3.exe
Inches :: 60
Yards :: 1.66667

-----
Process exited after 0.03116 seconds with return value 0
Press any key to continue . . .
```

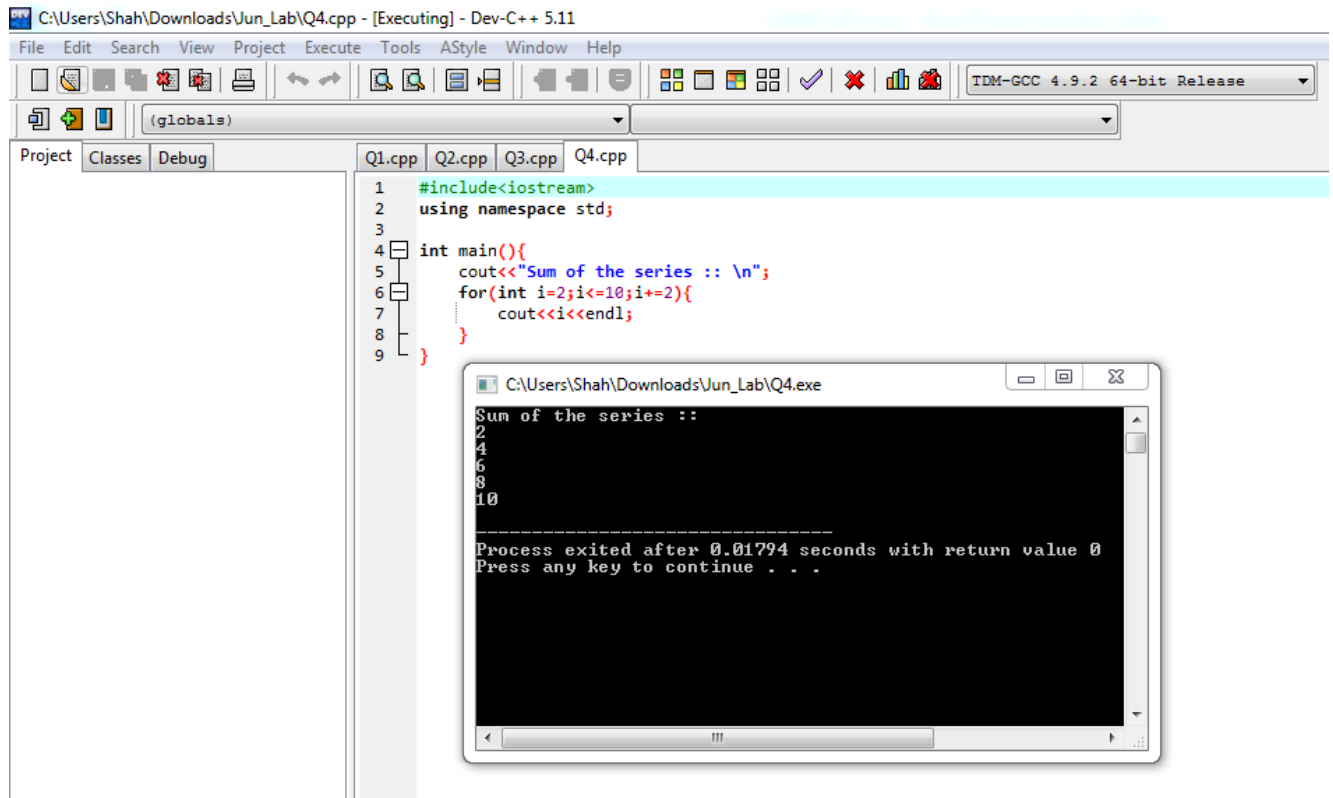
QNo4: Write a C++ program to find the sum of the following series:

2+4+6+8+10?

Answer: Code:

```
#include<iostream>
using namespace std;
int main(){
    cout<<"Sum of the series :: \n";
    for(int i=2;i<=10;i+=2){
        cout<<i<<endl;
    }
}
```

CODE & OUT PUT:



The image shows a screenshot of the Dev-C++ IDE. The main window displays the source code for a C++ program. The code is as follows:

```
1 #include<iostream>
2 using namespace std;
3
4 int main(){
5     cout<<"Sum of the series :: \n";
6     for(int i=2;i<=10;i+=2){
7         cout<<i<<endl;
8     }
9 }
```

The code is executed, and the output is shown in a separate window titled "C:\Users\Shah\Downloads\Vun_Lab\Q4.exe". The output is:

```
Sum of the series ::
2
4
6
8
10
-----
Process exited after 0.01794 seconds with return value 0
Press any key to continue . . .
```

QNo5: Write a C++ program to input Hours Worked and Hour Rate of an Employee. Calculate and display the Gross-Pay, Tax and Net-Pay; where

Gross-Pay=Hour-Worked*Hour-Rate

Tax=10% of Gross-Pay

Net-Pay=Gross-Pay – Tax

Answer: **Code:**

```
#include<iostream>
```

```
using namespace std;
```

```
int main(){
```

```
    float Worked_Hour,Hour_Rate,Gross_Pay,Tax,Net_Pay;
```

```
    cout<<"Enter Worked Hour and Hour Rate of an Employee :: ";
```

```
    cin>>Worked_Hour>>Hour_Rate;
```

```
    Gross_Pay = Worked_Hour*Hour_Rate;
```

```
    Tax = Gross_Pay/10;
```

```
    Net_Pay = Gross_Pay - Tax;
```

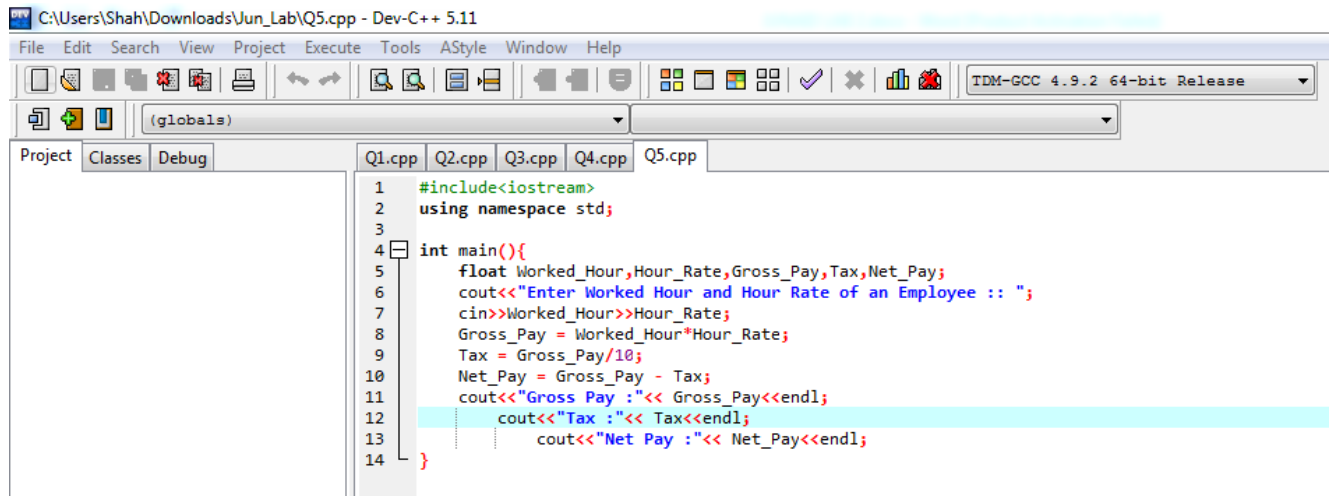
```
    cout<<"Gross Pay :"<< Gross_Pay<<endl;
```

```
        cout<<"Tax :"<< Tax<<endl;
```

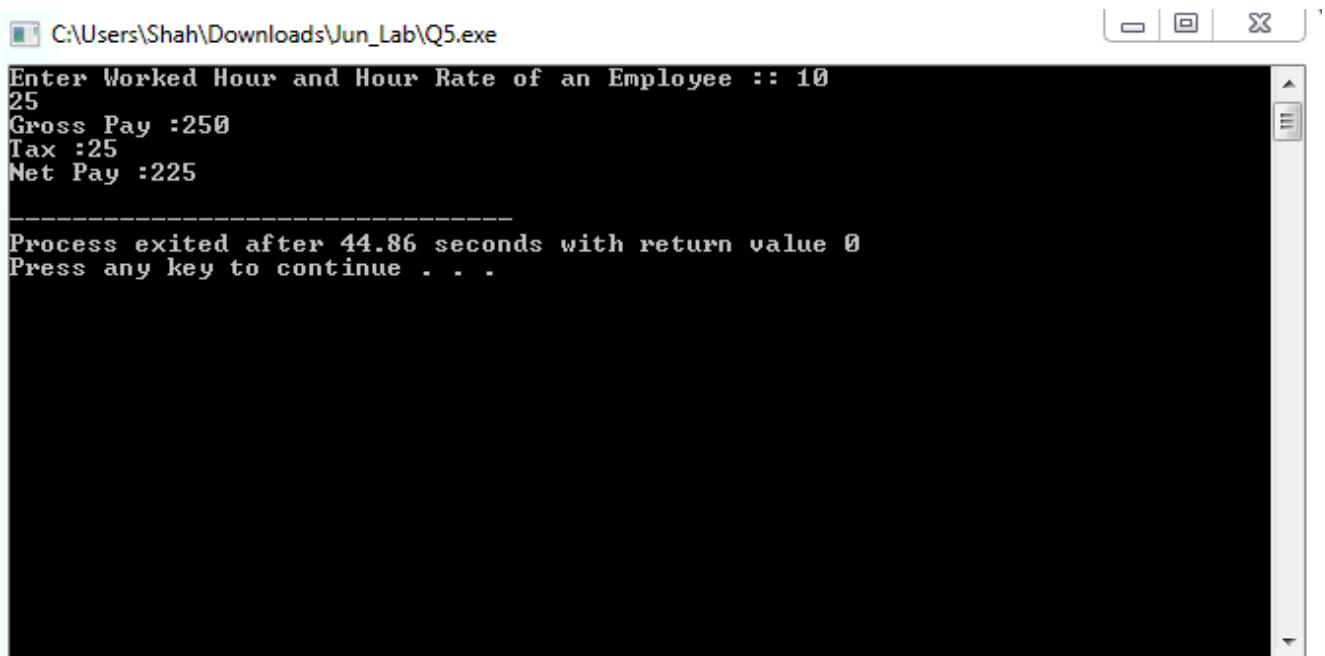
```
            cout<<"Net Pay :"<< Net_Pay<<endl;
```

```
}
```


CODE & OUT PUT:



```
1  #include<iostream>
2  using namespace std;
3
4  int main(){
5      float Worked_Hour,Hour_Rate,Gross_Pay,Tax,Net_Pay;
6      cout<<"Enter Worked Hour and Hour Rate of an Employee :: ";
7      cin>>Worked_Hour>>Hour_Rate;
8      Gross_Pay = Worked_Hour*Hour_Rate;
9      Tax = Gross_Pay/10;
10     Net_Pay = Gross_Pay - Tax;
11     cout<<"Gross Pay :"<< Gross_Pay<<endl;
12     cout<<"Tax :"<< Tax<<endl;
13     cout<<"Net Pay :"<< Net_Pay<<endl;
14 }
```



```
C:\Users\Shah\Downloads\Jun_Lab\Q5.exe
Enter Worked Hour and Hour Rate of an Employee :: 10
25
Gross Pay :250
Tax :25
Net Pay :225

-----
Process exited after 44.86 seconds with return value 0
Press any key to continue . . .
```