



Iqra National University Peshawar Pakistan
Department of Computer Science

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Program:	BS(SE)	Student's Name:	Saad Ali
Paper:	Programming Fundamentals	Student's ID:	16880
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Q1. 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;

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

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

CODE:

```
#include <iostream>
#include <math.h>
using namespace std;

int main()
{
    int A, B, C;
    double S, Area;
    cout<<"Enter first side of Triangle ";
    cin>>A;
    cout<<"Enter second side of Triangle ";
    cin>>B;
```

```

cout<<"Enter third side of Triangle ";
cin>>C;
S=(A+B+C)/2;
Area = sqrt(S*(S-A)*(S-B)*(S-C));
cout<<"Area of Triangle= "<<Area<<endl;
return 0;
}

```

Q2. To Write a program 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.**

CODE:

```

#include<iostream>
using namespace std;

int main()
{
float p;
cout<<"Enter Percentage of Student= ";
cin>>p;
if(p>=60)
cout<<" 1st Division "<<endl;
if(p>=50 && p<60)
cout<<" 2nd Division "<<endl;
if(p>=40 && p<50)
cout<<" 3rd Division "<<endl;

```

```
if(p<40)
    cout<<" Fail "<<endl;
return 0;
}
```

Q3. Write a C++ program to convert 5 feet to the equivalent number of (a) inches (b) yards. Where (1 foot = 12 inches and 1 yard = 3 feet).

CODE:

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

int main()
{
    float feet, inches;
    double yards;
    feet = 5;
    inches= 12*feet;
    cout<<"5 feet is equal to "<<inches<<" inches."<<endl;
    yards= feet/3;
    cout<<"5 feet is equal to "<<yards<<" yards."<<endl;
    return 0;
}
```

Q4. Write a C++ program to find the sum of the following series:

$$2+4+6+8+10$$

CODE:

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

```

int main()
{
    int sum;

    cout<<"Find sum of the series 2+4+6+8+10"<<endl;

    sum= 2+4+6+8+10;

    cout<<"Sum of the Series= "<<sum<<endl;

    return 0;
}

```

Q5. 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

CODE:

```

#include<iostream>

using namespace std;

int main()
{
    float Hour_Worked, Hour_Rate;

    double Gross_pay, Tax, Net_pay;

    cout<<"Enter Employee's Hour-Worked= ";

    cin>>Hour_Worked;

    cout<<"Enter Employee's Hour-Rate= ";

    cin>>Hour_Rate;

    Gross_pay= Hour_Worked*Hour_Rate;

    cout<<"Gross-Pay of Employee= "<<Gross_pay<<endl;

    Tax= Gross_pay/100*10;
}

```

```
cout<<"Tax of Employee= "<<Tax<<endl;
Net_pay= Gross_pay-Tax;
cout<<"Net-pay of Employee= "<<Net_pay<<endl;
return 0;
}
```
