C++ Conditionals

Assignment Solutions

PW SKILLS

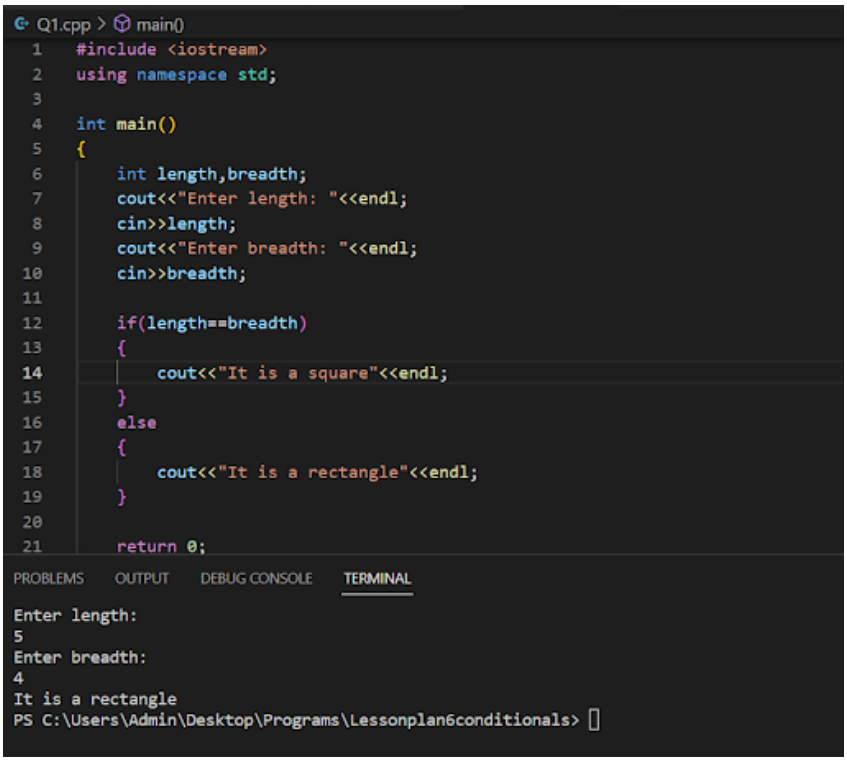
Q1- Write a program which takes the values of length and breadth from user and check if it is a square or not.

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

int main()
{
    int length,breadth;
    cout<<"Enter length: "<<endl;
    cin>>length;
    cout<<"Enter breadth: "<<endl;
    cin>>breadth;

    if(length==breadth)
    {
       cout<<"It is a square"<<endl;
    }
    else
    {
        cout<<"It is a rectangle"<<endl;
    }

    return 0;
}
```



Q2- Write a program to print absolute value of a number entered by the user.

```
#include <iostream>
using namespace std;
int main()
{
    int x;
    cout<<"Enter a number"<<endl;
    cin>>x;
    if(x<0)
    {
        x = x*(-1);
    }
    cout<<"Absolute value is "<<x<<endl;
    return 0;
}
```

Q3- Write a program to take input from user for Cost Price (C.P.) and Selling Price (S.P.) and calculate Profit or Loss.

```
#include <iostream>
using namespace std;
int main()
{
    int CP,SP, amt;    //Input cost price and selling price of a product
    cout<<"Enter cost price: ";
    cin>>CP;
    cout<<"Enter selling price: ";
    cin>>SP;
    if(SP > CP)
    {
        amt = SP - CP;      //Calculate Profit
        cout<<"Profit = "<<amt;
    }
```

```
    else if(CP > SP)
    {
        amt = CP - SP;        //Calculate Loss
        cout<<"Loss = "<<amt;
    }
    else
    {
       cout<<"No Profit No Loss.";  // Neither profit nor loss
    }
    return 0;
}
```

```
Q3.cpp > main()
1   #include <iostream>
2   using namespace std;
3   int main()
4   {
5       int CP,SP, amt;         //Input cost price and selling price of a product
6       cout<<"Enter cost price: ";
7       cin>>CP;
8       cout<<"Enter selling price: ";
9       cin>>SP;
10      if(SP > CP)
11      {
12          amt = SP - CP;      //Calculate Profit
13          cout<<"Profit = "<<amt;
14      }
15      else if(CP > SP)
16      {
17          amt = CP - SP;       //Calculate Loss
18          cout<<"Loss = "<<amt;
19      }
20      else
21      {
22         cout<<"No Profit No Loss.";  // Neither profit nor loss
23      }

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

PS C:\Users\Admin\Desktop\Programs\Lessonplan6conditionals> cd "c:\Users\Admin\Desktop\Programs\L
 if ($?) { g++ Q3.cpp -o Q3 } ; if ($?) { .\Q3 }
Enter cost price: 4000
Enter selling price: 9560
Profit = 5560
PS C:\Users\Admin\Desktop\Programs\Lessonplan6conditionals>
```

Q4- Write a program to print positive number entered by the user, if user enters a negative number, it is skipped

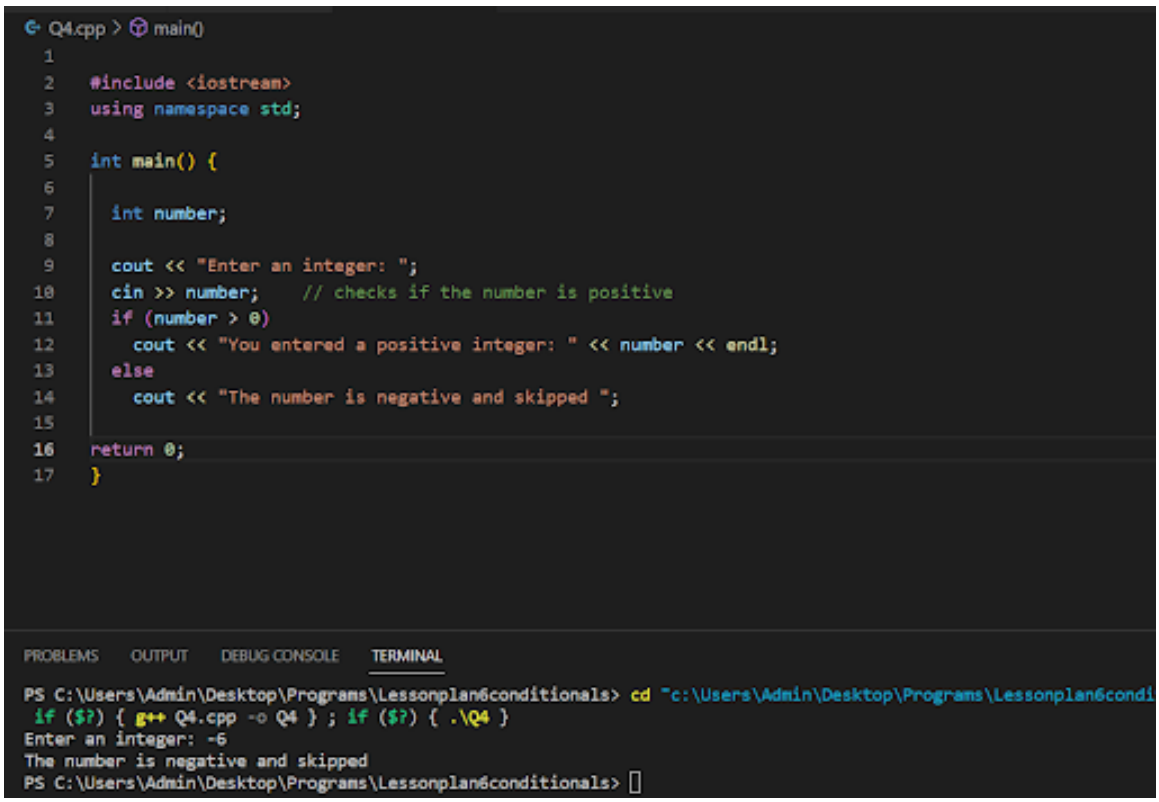
```cpp
#include <iostream>
using namespace std;

int main() {

  int number;

  cout << "Enter an integer: ";
  cin >> number;    // checks if the number is positive
  if (number > 0)
    cout << "You entered a positive integer: " << number << endl;
  else
    cout << "The number is negative and skipped ";

return 0;
}
```



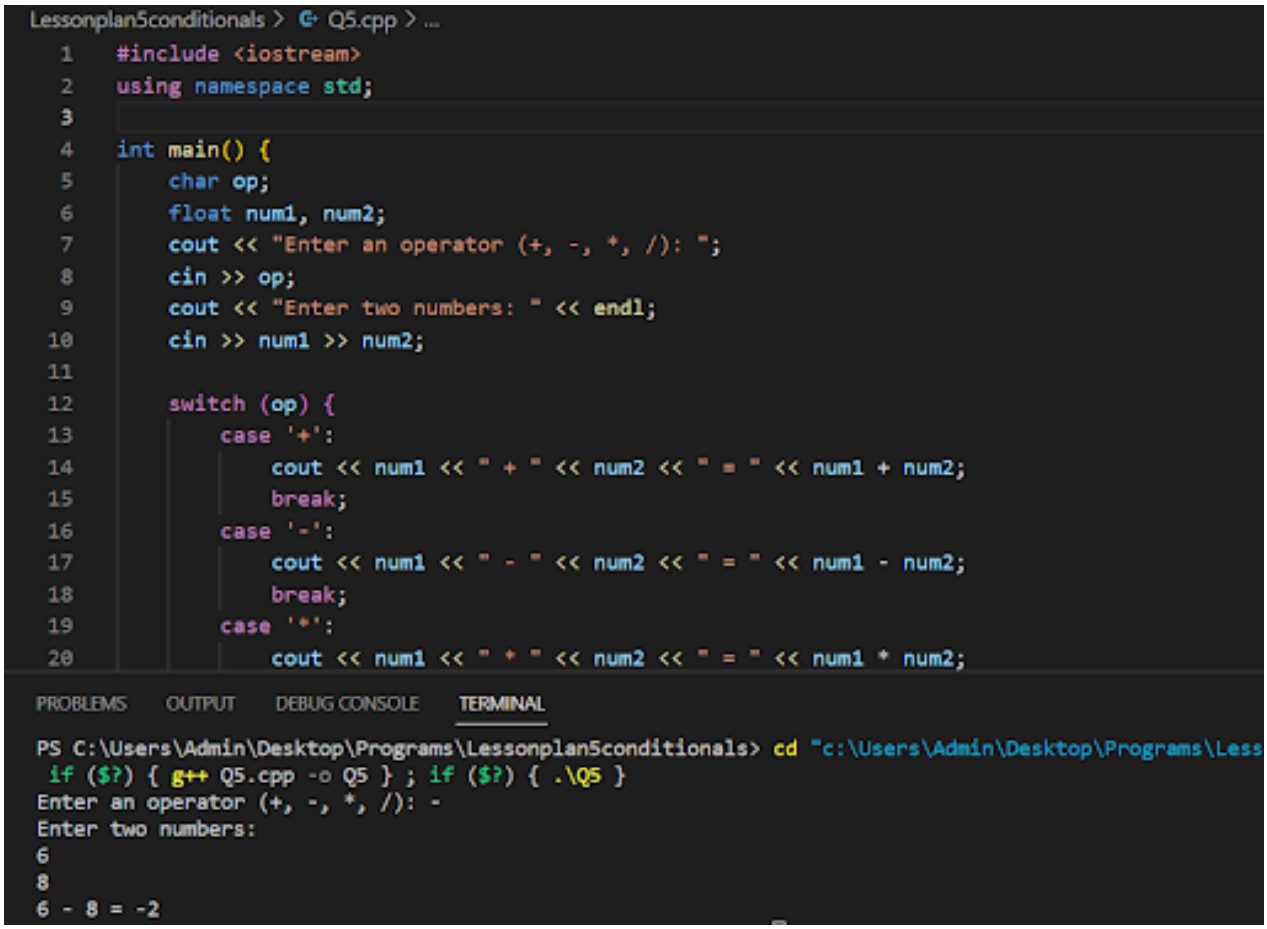
Q5- Create a calculator using switch statement to perform addition, subtraction, multiplication and division.

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

int main() {
    char op;
    float num1, num2;
    cout << "Enter an operator (+, -, *, /): ";
    cin >> op;
    cout << "Enter two numbers: " << endl;
    cin >> num1 >> num2;

    switch (op) {
        case '+':
            cout << num1 << " + " << num2 << " = " << num1 + num2;
            break;
        case '-':
            cout << num1 << " - " << num2 << " = " << num1 - num2;
            break;
        case '*':
            cout << num1 << " * " << num2 << " = " << num1 * num2;
            break;
        case '/':
            cout << num1 << " / " << num2 << " = " << num1 / num2;
            break;
        default:
            cout << "Error! The operator is not correct";
            // operator doesn't match with any case constant (+, -, *, /)
            break;
    }

    return 0;
}
```



Q6- Write a program to calculate marks to grades . Follow the conversion rule as given below :

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

int main(){
    int marks;
    cout<<"Enter Your Marks: ";
    cin>>marks;
    if (marks >= 90){
        cout<<"Your Grade is A+";
    }
    else if (marks >= 80){
        cout<<"Your Grade is A";
    }
    else if (marks >= 70){
        cout<<"Your Grade is B+";
    }
```

```
    else if (marks >= 60){
        cout<<"Your Grade is B";
    }
    else if (marks >= 50){
        cout<<"Your Grade is C";
    }
    else if (marks >= 40){
        cout<<"Your Grade is D";
    }
    else if (marks >= 30){
        cout<<"Your Grade is E";
    }
    else if (marks <= 30){
        cout<<"Your Grade is F";
    }
    else{
        cout<<"Enter Valid Marks";
    }
    return 0;
}
```