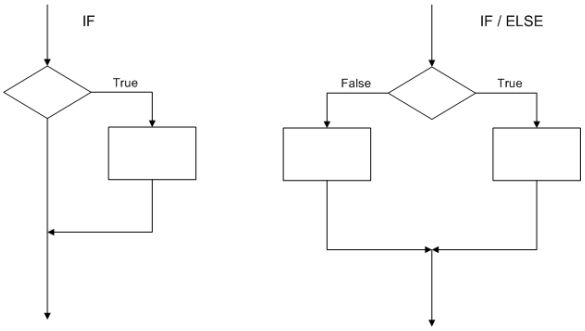

1. *Display if some pass or fail on the exam*

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

int main ()
{

int grade;
cout<<"Enter grade: ";
cin>> grade;

if (grade >=6)
     {
       cout<<"You pass the exam!";
      }
else
       cout<<"You fail!";

cin.get(); cin.get();

return 0;
}
```

2. The program asks the user for two numbers, then tests if the first number is less than the second number. If the first number is the larger number, the program reports that fact; otherwise, it reports that the second number is the larger number.
   This program does not handle the situation where the two numbers are equal.

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

int main ()
{
int first;
   cout << "Enter the first number: ";
   cin >> first;
   cout << endl;

   int second;
   cout << "Enter the second number: ";
   cin >> second;
   cout << endl;
```

```
   if (first > second)
   {
      cout << "The number " << first << " is the larger number." << endl;
   }
   else
   {
      cout << "The number " << second << " is the larger number." << endl;
   }


cin.get(); cin.get();

return 0;
}
```

3. *The previous exercise but little bit advanced* ☺ a>b a<b or a=b

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

int main ()
{
      int a,b;

      cout<<"Enter first number\t";
      cin>>a;

      cout<<"Enter second\t";
      cin>>b;

      if(a>b)
      {
            cout<<a<<" > "<<b;
      }
      else
            if (a==b)
            { cout<<a<<" = "<<b; }
            else
            { cout<<a<<" < "<<b; }

      cin.get();cin.get();

      return 0;
}
```

4. Displaying the grade depending of the entered points

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

int main ()
{
      int points,grade;
      cout<<"Enter gathered points\t";
      cin>> points;

      if(points >=90)
            grade =10;
      else
```

```
            if(points >=80)
                  grade =9;
            else
                  if(points >=70)
                        grade =8;
                  else
                        if(points >=60)
                              grade =7;
                        else
                              if(points >=50)
                                    grade =6;
                              else
                                    grade =5;
      cout<<"You have\t"<< grade;

    cin.get(); cin.get();

return 0;
}
```

5. Maximum from three entered numbers

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

int main ()
{
      int a,b,c,max;

      cout<<"Enter 3 numbers separating them by space or enter\t";
      cin>>a>>b>>c;

      max=a;
            if(b>max)
                  max=b;
            if(c>max)
                  max=c;

      cout<<"The maximum is\t"<<max;

      cin.get(); cin.get();

      return 0;
}
```

6. Odd or even

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

int main ()
{
int x;

cout<<" \n Enter value for x:\n";
cin>>x;

bool iseven;

if (x%2==0)
```

```
      iseven=true;
else
      iseven=false;

if (iseven==true)
      cout<<"\n The number is even!"<<endl;
 else
      cout<<"\n The number is odd!"<<endl;

cin.get();cin.get();
return 0;
}
```

7. Version of ex. 6:

```
#include <iostream>
using namespace std;
int main ()
{
int x;
cout<<" \n Enter value for x:\n";
cin>>x;

if (x%2==0)
cout<<"\n The number is even!"<<endl;
else
cout<<"\n The number is odd!"<<endl;

cin.get();cin.get();
return 0;
}
```

8. The relationships between 2 numbers ☺

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

int main()
{
   int num1, num2;

   cout << "Enter two integers, and I will tell you\n"
        << "the relationships they satisfy: ";
   cin >> num1 >> num2;   // read two integers

   if ( num1 == num2 )
      cout << num1 << " is equal to " << num2 << endl;

   if ( num1 != num2 )
      cout << num1 << " is not equal to " << num2 << endl;

   if ( num1 < num2 )
      cout << num1 << " is less than " << num2 << endl;

   if ( num1 > num2 )
      cout << num1 << " is greater than " << num2 << endl;

   if ( num1 <= num2 )
```

```
      cout << num1 << " is less than or equal to "
           << num2 << endl;

   if ( num1 >= num2 )
      cout << num1 << " is greater than or equal to "
           << num2 << endl;

cin.get();cin.get();
return 0;   // indicate that program ended successfully
}
```

9. Max of 3 integers

```
#include <iostream>
using namespace std;
int main()
{
   int a,b,c, max ;
  cout << "Enter  integer values: ";
   cin >> a>>b>>c;   // read three integers

  if (( a>b)&&(a>c)) max=a; //logical AND (&&) and logical OR (||)
            if (( b>a)&&(b>c)) max=b;
                  if (( c>a)&&(c>b)) max=c;
                        cout << "Maximum of three integer numbers is   " <<
max<<endl;

   cin.get();   cin.get();
   return 0;   // indicate that program ended successfully
}
```

10. Is Right Triangle…

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

int main()
{
   float a,b,c;
   cout << "Enter  integer values: ";
   cin >> a>>b>>c;   // read three integers

   if (c==sqrt(b*b+a*a))

cout << "The triangle is right! "<<endl;
  else

cout << " The triangle is not right! "<<endl;

cin.get(); cin.get();
   return 0;   // indicate that program ended successfully
}
```

10. Display type of triangle

```
#include<iostream>
```

```
using namespace std;

int main()
{
int a,b,c;
cout<<"Enter Angle a: ";
cin>>a;
cout<<"Enter Angle b: ";
cin>>b;
cout<<"Enter Angle c: ";
cin>>c;
if(a==b && b==c && c==a)
{
cout<<"Equivalent Triangle"<<endl;
}
else if(a==b || b==c || c==a)
{
cout<<"Isosceles Triangle"<<endl;
}
else
{
cout<<"Scalane Triangle"<<endl;
}
cin.get();
cin.get();
return 0;
}
```

11. Displaying the smaller number from two entered…

```
#include <iostream>
using namespace std;
int main()
{
   float x, y, min;
   cout << "Enter two different numbers:\n";
   if( cin >> x && cin >> y)
   {
     if( x < y )
        min = x;
     else
       min = y;
     cout << "\nThe smaller number is: " << min << endl;
   }
   else
     cout << "\nInvalid Input!" << endl;
   cin.get(); cin.get();
   return 0;
}
```

12. Test score…

```
#include <iostream>
using namespace std;
int main()
{
   int testScore;
   cout << "Enter your test score: ";
```

```
   cin >> testScore;
   if (testScore >= 90 )
      cout << "Your grade is an A" << endl;
   else if (testScore >= 80 )
      cout << "Your grade is a B" << endl;
   else if (testScore >= 70 )
      cout << "Your grade is a C" << endl;
   else if (testScore >= 60 )
      cout << "Your grade is a D" << endl;
   else
      cout << "Your grade is an F" << endl;
   cin.get(); cin.get();
   return 0;
}
```

13. Basic exercise with if

```
#include <iostream>
using namespace std;
int main() {
      int a;
      cout<<"Enter value for a";
      cin>>a;
      if (a==0)
            cout<<"You entered value for a equal to 0";

      cin.get(); cin.get();
   return 0;
}
```

14. Check if a is in the interval form 1 to 5

```
#include <iostream>
using namespace std;
int main() {
      int a;
      cout<<"Enter value for a ";
      cin>>a;
      if ((a>=1)&&(a<=5))
            cout<<"a is in the interval from 1 to 5";
       cin.get(); cin.get();
   return 0;
}
```

15. Checks if Variable a has value different or equal to 0

```
#include <iostream>
using namespace std;
int main()
{ int a;
cout<<"Enter value for a ";
cin>>a;
if (a==0)
cout<<"Variable a has value 0";
else
cout<<"Variable a has value different than 0";

cin.get(); cin.get();
```

```
   return 0;
}
```

16. Change values on two entered variables if first is bigger than second entered value

```
#include <iostream>
using namespace std;
int main()
{
      int a,b,t;
      cout<<"Enter values for a and b: ";
    cin>>a>>b;
      cout<<"You enter value for a= "<<a;
      cout<<"\nYou enter value for b= "<<b;

if (a>b)
{ t=a;
  a=b;
  b=t; }

cout<<"\nNew value for a is "<<a;
      cout<<"\nNew value for b is "<<b;
cin.get(); cin.get();
   return 0;
}cin.get(); cin.get();
   return 0;

}
```

17. Calculator

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

int main ()
    { float first_num, second_num; // The two numbers
      int which_one;           // Specified calculation
      float result;             // The answer.
      cout << "Please enter the first number : ";
      cin >> first_num;
      cout << "Please enter the second number : ";
      cin >> second_num;

      cout << "Press 1 to add the two numbers"
           << endl
           << "Press 2 to subtract the two numbers."
           << endl
           << "Press 3 to multiply the two numbers."
           << endl
           << "Press 4 to divide the two numbers."
           << endl;

      cin >> which_one;
      if (which_one == 1)
        result = first_num + second_num;
      if (which_one == 2)
        result = first_num - second_num;
      if (which_one == 3)
```

```
        result = first_num * second_num;
      if (which_one == 4)
        result = first_num / second_num;
      cout << "The result is " << result << endl;
        cin.get();
              cin.get();
              return 0;
    }
```