Section-2 (If Statement)

1. -The academic standing of a student is determined based on the number of the credit hours that the student has achieved. The rules are as follows:

Number of Credit Hours (CrH)	Academic Standing
CrH < 30	Freshman
30 <= CrH < 60	Sophomore
60 <= CrH < 90	Junior
90 <= CrH < 120	Senior
CrH <= 120	Graduating Senior

Write a program in C++ to input the number of credit hours achieved by the student and print out his/her academic standing. Implement your solution in C++ once using nested-if structure and second using switch structure. Validate the user input to accept only number of credit hours that is between 0 and 133 (inclusive).

2. Write a C++ program to enter an integer number of 3 binary digits and print its equivalent decimal value. For example if the input is 101 the output should be 5.

3. Write a C++ program to promote the user to enter a char (+, -, *, /) and two float numbers between 1 and 100 inclusive. To create a calculator.

   For example:
   Please enter a character: +
   Please enter the first number: 50
   Please enter the second number: 40
   The Result is: 90

4. Write a C++ program that reads three scores of a student in three tests to compute and display the largest score.

5. On a certain day the British pound was equivalent to $1.487 U.S., the French franc was $0.172, the German deutschemark was $0.584, and the Japanese yen was $0.00955. Write a program that allows the user to enter an amount in dollars, and then displays this value converted to these four other monetary units.
   Sample Input: 5.43
   Sample Output:
   3.65165 pounds
   31.5698 francs
   9.29795 marks
   568.586 yens

6. Write a program that reads an integer and breaks it into a sequence of individual digits. For example, the input 16384 is displayed as 1 6 3 8 4 you may assume that the input has no more than five digits and is not negative

7. **What is the error in this statement?**

```
if (score_a = score_b) {
cout << "Tie" << endl; }
```

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8. **Supply a condition in this if statement to test whether the user entered a Y:**

```
string input;
cout << "Enter Y to quit." << endl;
cin >> input;
if (...) { cout << "Goodbye." << endl;
return 0; }
```

9. Write a program that reads three numbers and prints “increasing” if they are in increasing order, “decreasing” if they are in decreasing order, and “neither” otherwise. Here, “increasing” means “strictly increasing”, with each value larger than its pre decessor. The sequence 3 4 4 would not be considered increasing.

10. Write a program that takes user input describing a playing card in the following shorthand notation:

A	Ace
2 ... 10	Card values
J	Jack
Q	Queen
K	King
D	Diamonds
H	Hearts
S	Spades
C	Clubs

Your program should print the full description of the card. For example,
Enter the card notation: QS
Queen of Spades

11. **Trace the following program:**

```
#include <iostream>
#include <string>
using namespace std;
void main()
{
	string name;
	int password;

	cout <<"Enter the name: ";
	cin >> name;
	cout <<"Enter your password: ";
	cin >> password;
	if (name == "GG") {
		if (password == 1346) {
			cout <<"Login successful";
		}
		else {
			cout <<"Incorrect PASSWORD, Try again.";
		}
	}
	else {
		cout <<"Incorrect Login Details, Try again.";
	}
}
```