Computer Science

Computer Programming Cheat Sheet   **C++ Control Statements**

If

```cpp
1   #include <iostream>
2   using namespace std;
3
4   int main(int argc, char** argv) {
5
6       //read user mark, and check if pass or fail
7       float mark;
8       cout<<"Enter Mark: ";
9       cin>>mark;
10
11       if (mark >= 50){
12           cout<<"You have passed the exam"<<endl;
13           cout<<"Your mark is "<<mark;
14       }
15       return 0;
16   }
```

If-else

```cpp
1   #include <iostream>
2   using namespace std;
3
4   int main(int argc, char** argv) {
5
6       //read user mark, and check if pass or fail
7       float mark;
8       cout<<"Enter Mark: ";
9       cin>>mark;
10
11       if (mark >= 50){
12           cout<<"You have passed the exam"<<endl;
13       }else{
14           cout<<"You have failed the exam"<<endl;
15       }
16       cout<<"Your mark is "<<mark;
17
18       return 0;
19   }
```

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If-else-if

```cpp
//Grade checker
//assume all marks less than 80 will get B+
//you finish this code to in order to include all
//grade letters

float mark;
cout<<"Enter your mark:";
cin>>mark;

if (mark >= 90){
    cout<<"A+";
}else if (mark >= 85 && mark < 90){
    cout<<"A";
}else if (mark >= 80 && mark < 85)   //[80, 85)
{
    cout<<"A-";
}else{
    cout<<"B+";
}
```

Nested If-else

```cpp
/*
    This code takes integer number, age from
    user and checks if user can get license.
    Assumption: User above or equal to 24 can get license.
*/
int age;
cin>>age;
if (age < 18){
    //here
    cout<<"You are teenage";
    cout<<"Get ID first";
}else{
    // >= 18
    if (age < 24){
        //age is between 18 and 24 [18, 24)
        cout<<"You can get ID";
    }else{
        //now the age is greater or equal to 24 [24, ...)
        cout<<"You can get license";
    }
}
```

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