

/\* A company develops a software using pair programming two programmers as a team to develop the software:

The selection process for the team is formulated as follow

(1) Each programmer is represented as a linear combination of the form  $aG + bP + cI$

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

```
class Programmer{  
public:  
    int C, P, I; // G=Graduation, P=Post-graduation, I=Interview scores
```

```
// Constructor to initialize marks
```

```
Programmer(int graduation, int pg, int interview)  
{  
    C = graduation;  
    P = pg;  
    I = interview;  
}  
};
```

```
int main() {
```

```
    int Grad1, Pg1, inter1, Grad2, Pg2, inter2;
```

```
    cout << "The range of the marks for the graduation(G), Post-Graduation(PG), Interview(I) is: " << endl;
```

```
    cout << "Graduation    (66<A<99)" << endl;
```

```
    cout << "Post-graduation    (66<B<99)" << endl;
```

```
    cout << "Interview    (0<C<10)" << endl;
```

```
    //Enter grades for the First Person:
```

```
    cout << "Enter marks (Graduation, Post-graduation, Interview) for Programmer(1): " << endl;
```

```
    cin >> Grad1 >> Pg1 >> inter1;
```

```
    cout << "programmer(1) Graduation Marks: " << Grad1 << " Post-graduation Marks: " << Pg1 << " Interview Marks: " << inter1 << endl;
```

```
    //Enter grades for the Second Person:
```

```
    cout << "Enter marks (Graduation, Post-graduation, Interview) for Programmer(2): " << endl;
```

```
    cin >> Grad2 >> Pg2 >> inter2;
```

```
    cout << "programmer(2) Graduation Marks: " << Grad2 << " Post-graduation Marks: " << Pg2 << " Interview Marks: " << inter2 << endl;
```

```
//Here we need to check the mark range for the validity:
```

```
if ((Grad1 <= 60 || Grad1 >= 99) || (Pg1 <= 60 || Pg1 >= 99) || (inter1 < 0 || inter1 >= 10) ||  
    (Grad2 <= 60 || Grad2 >= 99) || (Pg2 <= 60 || Pg2 >= 99) || (inter2 < 0 || inter2 >= 10)) {  
    cout << "Invalid marks! Please enter marks within the specified range.\n";  
    return 1;  
}
```

```
// Creating the programmer objects
```

```
Programmer prog1(Grad1, Pg1, inter1);
```

```
Programmer prog2(Grad2, Pg2, inter2);
```

```
cout << "The condition for the SELECTION is: " << endl << "total Graduation marks: > 150 && total Post-Graduation marks: > 180 && total Interview marks: > 90" << endl;
```

```
// Calculate total scores of the programmers Based on their (Graduation, Post-graduation, Interview)
```

```
int totalC = prog1.C + prog2.C;
```

```
int totalP = prog1.P + prog2.P;
```

```
int totalI = prog1.I + prog2.I;
```

```
// Here we need to select the developer according to their total score:
```

```
if (totalC > 150 && totalP > 180 && totalI > 90)
```

```
{
```

```
    cout << "The team is SELECTED for development.\n";
```

```

        cout << "TOTAL Graduation Marks: " << totalC << " (66<A<99)" << endl;
        cout << "TOTAL Post-graduation Marks: " << totalP << " (66<B<99)" << endl;
        cout << "TOTAL Interview Marks: " << totalI << " (0<C<10)" << endl;
    }
    else
    {
        cout << "The team is NOT SELECTED \n" << endl;
        cout << "Due to lack of grades \n where your marks are not reaching the point !!!:" << endl;
        cout << "TOTAL Graduation Marks: " << totalC << " (66<A<99)" << endl;
        cout << "TOTAL Post-graduation Marks: " << totalP << " (66<B<99)" << endl;
        cout << "TOTAL Interview Marks: " << totalI << " (0<C<10)" << endl;
    }

    return 0;
}

```