

## Assignment No 6

### Code

```
#include <iostream>
#include <vector>
#include <map>
#include <iomanip>

using namespace std;

class Evaluation {
private:
    string name;
    map<string, vector<float>>> competencies;
    map<string, vector<float>>> performance;

    void printTable(map<string, vector<float>>>& hashMap, bool isCompetency) {
        if (isCompetency) {
            cout << "\nCompetency Goals\n";
            cout << "Competency\t\tRating\tWeightage\tWeighted Score\n";
            for (auto& kv : hashMap) {
                cout << kv.first << "\t\t" << kv.second[0] << "\t" << kv.second[1] << "\t\t" << kv.second[2] << "\n";
            }
        } else {
            cout << "\nPerformance Goals\n";
            cout << "Goals\t\tRating\tWeightage\tWeighted Score\n";
            for (auto& kv : hashMap) {
                cout << kv.first << "\t\t" << kv.second[0] << "\t" << kv.second[1] << "\t\t" << kv.second[2] << "\n";
            }
        }
        cout << endl;
    }

    void input() {
        cout << "Enter rating from 1-3\n";
        cout << "Weightage should be equal to 100\n";
        int weightTotal = 0;
        for (auto& kv : competencies) {
            cout << "Enter rating for " << kv.first << ": ";
            cin >> kv.second[0];
            cout << "Enter weightage(" << 100 - weightTotal << " remaining): ";
            cin >> kv.second[1];
            weightTotal += kv.second[1];
        }
    }
};
```

```

for (auto& kv : performance) {
    cout << "Enter rating for " << kv.first << ": ";
    cin >> kv.second[0];
    cout << "Enter weightage(" << 100 - weightTotal << " remaining): ";
    cin >> kv.second[1];
    weightTotal += kv.second[1];
}
}

```

```

void calcScore() {
    for (auto& kv : competencies) {
        kv.second[2] = kv.second[0] * kv.second[1] / 100.0;
    }
    for (auto& kv : performance) {
        kv.second[2] = kv.second[0] * kv.second[1] / 100.0;
    }
}
}

```

public:

```

Evaluation() {
    cout << "Enter name of employee: ";
    getline(cin, name);
    competencies = {
        {"Communication", {0, 0, 0}},
        {"Productivity", {0, 0, 0}},
        {"Creativity", {0, 0, 0}},
        {"Integrity", {0, 0, 0}},
        {"Punctuality", {0, 0, 0}}
    };
    performance = {
        {"Goal 1", {0, 0, 0}},
        {"Goal 2", {0, 0, 0}},
        {"Goal 3", {0, 0, 0}},
        {"Goal 4", {0, 0, 0}},
        {"Goal 5", {0, 0, 0}}
    };
}
}

```

```

void calculate() {
    input();
    calcScore();
    printTable(competencies, true);

    float sumCompetency = 0;
    for (auto& kv : competencies) {
        sumCompetency += kv.second[2];
    }
}

```

```

    }
    cout << "Sum of weighted scores-Competency = " << sumCompetency << "\n" << endl;

    printTable(performance, false);
    float sumPerformance = 0;
    for (auto& kv : performance) {
        sumPerformance += kv.second[2];
    }
    cout << "Sum of weighted scores-Performance = " << sumPerformance << "\n" << endl;

    float total = sumCompetency + sumPerformance;
    cout << fixed << setprecision(2);
    cout << "Overall Rating of " << name << " (out of 3): " << total << "\n";

    if (total >= 2.7) {
        cout << "Employee Exceeds expectations" << endl;
    } else if (total >= 1.7 && total < 2.7) {
        cout << "Employee meets expectations" << endl;
    } else {
        cout << "Employee fails expectations" << endl;
    }
}

};

int main() {
    Evaluation e;
    e.calculate();
    return 0;
}

```

Output :

```
PS C:\Users\nkolh\OneDrive\Desktop\6th sem practicals\AI\Code> cd "c:\Users\nkolh\
Enter name of employee: Pramila Kolhe
Enter rating from 1-3
Weightage should be equal to 100
Enter rating for Communication: 3
Enter weightage(100 remaining): 30
Enter rating for Creativity: 1
Enter weightage(70 remaining): 10
Enter rating for Integrity: 2
Enter weightage(60 remaining): 20
Enter rating for Productivity: 1
Enter weightage(40 remaining): 20
Enter rating for Punctuality: 3
Enter weightage(20 remaining): 20
Enter rating for Goal 1: 2
Enter weightage(0 remaining): 1
Enter rating for Goal 2: 1
Enter weightage(-1 remaining): 1
Enter rating for Goal 3: 2
Enter weightage(-2 remaining): 1
Enter rating for Goal 4: 2
Enter weightage(-3 remaining): 3
Enter rating for Goal 5: 1
Enter weightage(-6 remaining): 2

Competency Goals


| Competency    | Rating | Weightage | Weighted Score |
|---------------|--------|-----------|----------------|
| Communication | 3      | 30        | 0.9            |
| Creativity    | 1      | 10        | 0.1            |
| Integrity     | 2      | 20        | 0.4            |
| Productivity  | 1      | 20        | 0.2            |
| Punctuality   | 3      | 20        | 0.6            |



Sum of weighted scores-Competency = 2.2

Performance Goals


| Goals  | Rating | Weightage | Weighted Score |
|--------|--------|-----------|----------------|
| Goal 1 | 2      | 1         | 0.02           |
| Goal 2 | 1      | 1         | 0.01           |
| Goal 3 | 2      | 1         | 0.02           |
| Goal 4 | 2      | 3         | 0.06           |
| Goal 5 | 1      | 2         | 0.02           |



Sum of weighted scores-Performance = 0.13

Overall Rating of Pramila Kolhe (out of 3): 2.33
Employee meets expectations
PS C:\Users\nkolh\OneDrive\Desktop\6th sem practicals\AI\Code>
```