



**The University of Azad Jammu and**  
**Kashmir**

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**Course: Discrete Structure & Algorithm**

**Roll no: 11**

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**Task: Linear Search, 04**

## CODE:

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

int main() {
    const int size = 30;
    int roll[size], pf[size], oop[size], dsa[size];
    int searchRoll, index = -1;

    cout << "Enter roll numbers and marks of 30 students:\n";
    for (int i = 0; i < size; i++) {
        cout << "\nStudent " << i + 1 << ":\n";
        cout << "Roll Number: ";
        cin >> roll[i];

        cout << "PF Marks: ";
        cin >> pf[i];

        cout << "OOP Marks: ";
        cin >> oop[i];

        cout << "DSA Marks: ";
        cin >> dsa[i];
    }

    cout << "\nEnter roll number to search: ";
    cin >> searchRoll;

    for (int i = 0; i < size; i++) {
        if (roll[i] == searchRoll) {
            index = i;
            break;
        }
    }

    if (index != -1) {
        int total = pf[index] + oop[index] + dsa[index];
        float percentage = (total / 300.0) * 100;

        cout << "\nRecord Found!\n";
        cout << "Roll Number: " << roll[index] << endl;
        cout << "PF Marks: " << pf[index] << endl;
        cout << "OOP Marks: " << oop[index] << endl;
```

```
        cout << "DSA Marks: " << dsa[index] << endl;

        cout << "Total Marks: " << total << "/300" << endl;
        cout << "Percentage: " << percentage << "%" << endl;
    }
    else {
        cout << "\nRecord Not Found!" << endl;
    }

    return 0;
}
```

## OUTPUT:

Enter roll numbers and marks of 30 students:

Student 1:

Roll Number: 101

PF Marks: 85

OOP Marks: 78

DSA Marks: 90

Student 2:

Roll Number: 102

PF Marks: 67

OOP Marks: 73

DSA Marks: 80

Student 3:

Roll Number: 103

PF Marks: 92

OOP Marks: 88

DSA Marks: 95

Enter roll number to search: 103

Record Found!

Roll Number: 103

PF Marks: 92

OOP Marks: 88

DSA Marks: 95

Total Marks: 275/300

Percentage: 91.67%

Enter roll number to search: 999

Record Not Found!