

```

#include <iostream>
#include <cstdlib>
#include <cstring>
#include <iomanip>
using namespace std;

char getGrade(int score) {
    if (score >= 80 && score <= 100) return 'A';
    else if (score >= 70 && score <= 79) return 'B';
    else if (score >= 60 && score <= 69) return 'C';
    else if (score >= 50 && score <= 59) return 'D';
    else return 'F';
}

int main() {
    srand(static_cast<unsigned int>(time(0)));

    int n = rand() % 16 + 5;

    cout << "    Number of Students: " << n << endl;

    int* scores = new int[n];

    for (int i = 0; i < n; i++) {
        scores[i] = rand() % 101;
    }

    cout << left << setw(10) << "Student"
<< setw(10) << "Score" << "Grade" << endl;
    cout << "-----"
-----" << endl;

```

```
    int countA = 0, countB = 0, countC = 0, countD = 0, countF = 0;

    for (int i = 0; i < n; i++) {
        char grade = getGrade(scores[i]);
        cout << left << setw(10) << (i + 1)
              << setw(10) << scores[i]
              << grade << endl;

        switch (grade) {
            case 'A': countA++; break;
            case 'B': countB++; break;
            case 'C': countC++; break;
            case 'D': countD++; break;
            case 'F': countF++; break;
        }
    }

    cout << "\nstudent in class gread" << endl;
    cout << "A: " << countA << endl;
    cout << "B: " << countB << endl;
    cout << "C: " << countC << endl;
    cout << "D: " << countD << endl;
    cout << "F: " << countF << endl;

    delete[] scores;
}
```

NAME OF STUDENT

Student	Score	Grade
---------	-------	-------

1	17	F
2	42	F
3	56	D
4	14	F
5	68	C
6	67	C
7	43	F
8	75	B
9	3	F
10	30	F
11	80	A
12	48	F

student in class gread

A: 1

B: 1

C: 2

D: 1

F: 7

Student	Score	Grade
1	90	A
2	37	F
3	79	B
4	78	B
5	60	C
6	19	F
7	76	B
8	81	A
9	34	F
10	33	F
11	95	A
12	13	F
13	6	F
14	22	F
15	44	F
16	44	F
17	20	F
18	68	C
19	67	C

student in class gread

A: 3

B: 3

C: 3

D: 0

F: 10