

Addition: 25

Subtraction: 15

Multiplication: 100

Division: 4

The screenshot shows a dark-themed code editor interface, likely Visual Studio Code, with the following details:

- Explorer View:** Shows a tree structure of files under the 'vs' folder. Files include day90.c, day91.c, day92.c, day93.c, day94.c, day95.c, day96.c, day97.c, Definea... A, DMA A, DMA.c A, DoWhile... A, DoWhile... A, ex1 A, ex1.c A, exap13 U, exp3.1 U, and exp3.1.c U.
- Open Editors:** The 'day92.c' file is the active editor, showing the following C++ code:

```
c++ > C day92.c > main()
1 #include <stdio.h>
2
3 struct Student {
4     char name[50];
5     int roll;
6     float marks;
7 };
8
9 int main() {
10     struct Student s[5];
11
12     printf("Enter details of 5 students:\n");
13
14     for (int i = 0; i < 5; i++) {
15         printf("\nStudent %d\n", i + 1);
16
17         printf("Name: ");
18         scanf("%s", s[i].name);
19
20         printf("Roll: ");
21         scanf("%d", &s[i].roll);
22
23         printf("Marks: ");
24         scanf("%f", &s[i].marks);
25     }
26
27     printf("\n----- STUDENT LIST -----");
28     printf("Name\t\tRoll\tMarks\n");
29     printf("-----\n");
30
31     for (int i = 0; i < 5; i++) {
32         printf("%s\t\t%d\t%.2f\n", s[i].name, s[i].roll, s[i].marks);
33     }
34
35     return 0;
36 }
```

- Terminal:** The terminal window shows the command `cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day92.c -o day92 && "/Users/rishabhtrivedi/Documents/vs/c++/"day92` followed by the output of the program: "Enter details of 5 students:", "Student 1", "Name: rishabh", and "Roll: 40".
- Bottom Status Bar:** Displays indexing status ("Indexing completed."), file path ("c++ master*"), and system information ("Ln 17, Col 26 Spaces: 4 UTF-8 LF {} C ⚡ Go Live macos-clang-x64 ⚡ Prettier").

The screenshot shows a Visual Studio Code (VS Code) interface with the following details:

- Left Sidebar:** Includes icons for Explorer, Search, Issues, Repository, File Explorer, and Activity Stream.
- File Explorer:** Shows a folder structure under 'vs' for 'c++' containing files like day90, day91, day92, etc., up to day97.
- Open Editors:** A list of open files: exp11.2.c, exp12.1.c, exp12.2.c, exp13.c, exp14.1.c, day94.c, day95.c, day96.c, and day97.c (which is currently selected).
- Code Editor:** Displays C++ code for reading employee data from the console and writing it to a binary file ('employee.bin').
- Terminal:** Shows the command line output of the program execution.
- Bottom Status Bar:** Includes tabs for 'c++', 'master*', 'vs/c++', 'Debug', and 'Indexing completed.'
- Bottom Right:** Includes status indicators for 'Ln 49, Col 1', 'Spaces: 4', 'UTF-8', 'LF', 'C', 'Go Live', 'macos-clang-x64', and 'Prettier'.

```
c++ > day97.c > ...
1 #include <stdio.h>
2
3 // Structure for Employee
4 struct Employee {
5     char name[50];
6     int id;
7     float salary;
8 };
9
10 int main() {
11     struct Employee e1, e2;
12
13     // Take input from user
14     printf("Enter Employee Name: ");
15     scanf("%s", e1.name);
16
17     printf("Enter Employee ID: ");
18     scanf("%d", &e1.id);
19
20     printf("Enter Salary: ");
21     scanf("%f", &e1.salary);
22
23     // ----- Write to Binary File -----
24     FILE *fp = fopen("employee.bin", "wb");
25     if (fp == NULL) {
26         printf("Error opening file!\n");
27         return 1;
28     }
29
30     fwrite(&e1, sizeof(struct Employee), 1, fp);
31     fclose(fp);
32 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SPELL CHECKER 3

```
cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day97.c -o day97 && "/Users/rishabhtrivedi/Documents/vs/c++/"day97
● rishabhtrivedi@Rishabhs-MacBook-Air vs % cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day97.c -o day97 && "/Users/rishabhtrivedi/Documents/vs/c++/"da
y97
Enter Employee Name: rishabh
Enter Employee ID: 455667
Enter Salary: 456

Data read from file:
Name: rishabh
ID: 455667
Salary: 456.00
● rishabhtrivedi@Rishabhs-MacBook-Air c++ %
```

The screenshot shows a dark-themed code editor interface, likely Visual Studio Code, with the following details:

- Left Sidebar:** Includes icons for file operations (New, Open, Save, Find, Replace, Undo, Redo), a search bar, and a status bar indicating "Indexing completed".
- Top Bar:** Shows tabs for various files: exp11.2.c, exp12.1.c, exp12.2.c, exp13.c, exp14.1.c, day94.c, day95.c, day96.c, and day97.c (which is the active tab).
- Explorer View:** Displays a tree structure under the "vs" folder, specifically the "c++" folder, containing files like day90, day91, day92, day93, day94, day95, day95.c, day96, day96.c, and day97.c.
- Code Editor:** The main area displays the following C++ code:

```
c++ > C day97.c > ...
1 #include <stdio.h>
2
3 // Structure for Employee
4 struct Employee {
5     char name[50];
6     int id;
7     float salary;
8 };
9
10 int main() {
11     struct Employee e1, e2;
12
13     // Take input from user
14     printf("Enter Employee Name: ");
15     scanf("%s", e1.name);
16
17     printf("Enter Employee ID: ");
18     scanf("%d", &e1.id);
19
20     printf("Enter Salary: ");
21     scanf("%f", &e1.salary);
22
23     // ----- Write to Binary File -----
24     FILE *fp = fopen("employee.bin", "wb");
25     if (fp == NULL) {
26         printf("Error opening file!\n");
27         return 1;
28     }
29
30     fwrite(&e1, sizeof(struct Employee), 1, fp);
31     fclose(fp);
32
33     // ----- Read from Binary File -----
34     fp = fopen("employee.bin", "rb");
35     if (fp == NULL) {
36         printf("Error opening file!\n");
37         return 1;
38     }
39
40     fread(&e2, sizeof(struct Employee), 1, fp);
41     fclose(fp);
42
43     // ----- Display Data Read -----
44     printf("\nData read from file:\n");
45     printf("Name: %s\nID: %d\nSalary: %.2f\n", e2.name, e2.id, e2.salary);
```

The code implements a simple program to read and write employee data to a binary file named "employee.bin". It defines a struct "Employee" with fields name, id, and salary. The "main" function prompts the user for employee details, writes them to the file, and then reads the data back into another struct "e2" and prints it to the console.

This screenshot shows a C++ development environment in Visual Studio Code. The interface includes:

- SIDE BAR:** On the left, there are several icons for file operations like Open, Save, Find, and Settings.
- EXPLORER:** A tree view showing a folder structure under "c++".
- OPEN EDITORS:** A list of open files, with "day95.c c++" currently selected.
- CODE EDITOR:** The main workspace displays the following C++ code:

```
c++ > day95.c ...
1 #include <stdio.h>
2
3 // Structure definition
4 struct Student {
5     char name[50];
6     int roll;
7     int marks;
8 };
9
10 // Function that accepts a structure (passed by value)
11 void printStudent(struct Student s) {
12     printf("Name: %s | Roll: %d | Marks: %d\n", s.name, s.roll, s.marks);
13 }
14
15 int main() {
16     // Example input
17     struct Student s1 = {"Neha", 104, 92};
18
19     // Calling the function
20     printStudent(s1);
21
22     return 0;
23 }
24
```

- TERMINAL:** At the bottom, the terminal window shows the command-line output of running the program:

```
cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day95.c -o day95 && "/Users/rishabhtrivedi/Documents/vs/c++/"day95
● rishabhtrivedi@Rishabhs-MacBook-Air vs % cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day95.c -o day95 && "/Users/rishabhtrivedi/Documents/vs/c++/"day95
Name: Neha | Roll: 104 | Marks: 92
○ rishabhtrivedi@Rishabhs-MacBook-Air c++ %
```

- STATUS BAR:** The bottom bar shows indexing status ("Indexing completed."), file paths ("c++ master*+"), and system information ("Ln 24, Col 1 Spaces: 4 UTF-8 LF {} C ⚡ Go Live macos-clang-x64 ⚡ Prettier").

The screenshot shows a Visual Studio Code (VS Code) interface with the following details:

- File Explorer (Left):** Shows a tree view of files under the 'vs' workspace, including 'c++' and various C/C++ files like 'day90' through 'day97', 'DMA', 'DMA.c', 'DoWhile...', 'ex1', 'ex1.c', and 'exp13'.
- Open Editors (Top Left):** A list of open editor tabs, with 'day96.c' currently selected.
- Code Editor (Main Area):** Displays the contents of 'day96.c'. The code defines a nested structure for a Date and a struct Employee containing a Date. It includes a printEmployee function and a main function demonstrating its use.
- Terminal (Bottom):** Shows the command-line output of running the program. The command `cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day96.c -o day96 && "/Users/rishabhtrivedi/Documents/vs/c++/"day96` was run, followed by the program's output: "Name: Raj | ID: 11 | Joining Date: 12/05/2020".
- Bottom Status Bar:** Shows indexing status ("Indexing completed."), file path ("c++ master*"), and other system information like "macos-clang-x64" and "Prettier".

The screenshot shows the Visual Studio Code (VS Code) interface with a dark theme. The left sidebar contains various icons for file management, search, and other tools. The main area displays a C++ code editor with the following code:

```
c++ > C day93.c < main()
1 #include <stdio.h>
2
3 struct Student {
4     char name[50];
5     int roll;
6     float marks;
7 };
8
9 int main() {
10     int n = 3;
11     struct Student s[3] = {
12         {"Ravi", 101, 95},
13         {"Sita", 102, 85},
14         {"Aman", 103, 88}
15     };
16
17     int topperIndex = 0;
18
19     for (int i = 1; i < n; i++) {
20         if (s[i].marks > s[topperIndex].marks) {
21             topperIndex = i;
22         }
23     }
24
25     printf("Topper: %s (Marks: %.0f)\n", s[topperIndex].name, s[topperIndex].marks);
26
27     return 0;
28 }
```

The code defines a `Student` structure with `name`, `roll`, and `marks` fields. It then initializes an array of three `Student` objects with names Ravi, Sita, and Aman, and their respective roll numbers and marks. The program iterates through the array to find the student with the highest marks and prints their name and marks.

Below the code editor, the bottom navigation bar includes tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, PORTS, and SPELL CHECKER. The TERMINAL tab is active, showing the command line output of running the program:

```
cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day93.c -o day93 && "/Users/rishabhtrivedi/Documents/vs/c++/"day93
● rishabhtrivedi@Rishabhs-MacBook-Air vs % cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day93.c -o day93 && "/Users/rishabhtrivedi/Documents/vs/c++/"da
y93
Topper: Ravi (Marks: 95)
○ rishabhtrivedi@Rishabhs-MacBook-Air c++ %
```

The status bar at the bottom shows the current file is `day93.c`, the line and column are `Ln 20, Col 49`, and the encoding is `UTF-8`.

The screenshot shows the Visual Studio Code (VS Code) interface with a dark theme. The left sidebar contains various icons for file operations like Open, Save, Find, and Preferences. The Explorer sidebar on the left lists files and folders under the 'OPEN EDITORS' section, including 'day93.c c++', 'exp10.1.c', 'exp10.2.c', 'exp11.1.c', 'exp11.2.c', 'exp12.1.c', 'exp12.2.c', 'expap13.c', 'exp14.1.c', and 'day94.c c++'. Below this is a 'vs' folder containing 'c++' subfolders with files like 'day90', 'day91', 'day92', 'day93', 'day93.c', 'day94', 'day94.c', 'day95.c', 'day96.c', 'day97.c', 'Definea...', 'DMA', 'DMA.c', 'DoWhile...', 'DoWhile...', 'ex1', 'ex1.c', 'expap13', 'expap13.c', and 'exp3.1'. The main editor area displays the 'day94.c' file content:

```
c++ > day94.c > ...
1 #include <stdio.h>
2
3 // Define structure
4 struct Student {
5     char name[50];
6     int roll;
7     int marks;
8 };
9
10 // Function that accepts structure and prints its members
11 void printStudent(struct Student s) {
12     printf("Name: %s | Roll: %d | Marks: %d\n", s.name, s.roll, s.marks);
13 }
14
15 int main() {
16     struct Student s1 = {"Neha", 104, 92};
17
18     // Pass structure to function
19     printStudent(s1);
20
21     return 0;
22 }
```

The terminal at the bottom shows the command-line output of running the program:

```
cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day94.c -o day94 && "/Users/rishabhtrivedi/Documents/vs/c++/"day94
● rishabhtrivedi@Rishabhs-MacBook-Air vs % cd "/Users/rishabhtrivedi/Documents/vs/c++/" && gcc day94.c -o day94 && "/Users/rishabhtrivedi/Documents/vs/c++/"day94
Name: Neha | Roll: 104 | Marks: 92
○ rishabhtrivedi@Rishabhs-MacBook-Air c++ %
```