

OUTPUT

The image shows a C++ IDE with a dark theme. The top pane displays C++ code for a student management system. The code includes a menu loop that handles various operations like adding students, displaying information, searching by roll number, showing subject toppers, scholarship eligibility, failures, average marks, and awarding distinction students. The code is partially visible, showing lines 291 through 297.

```
291         break;
292     case 8:
293         showDistinctionAwardStudents();
294         break;
295     case 9:
296         printf("Exiting...\n");
297         exit(0);
```

The bottom pane is the TERMINAL window, showing the command prompt and the execution of the program. The command to compile and run the program is: `cd "c:\Users\adity\Desktop\" ; if ($?) { gcc dsa_project.c -o dsa_project } ; if ($?) { .\dsa_project }`. The output shows a menu with 9 options, and the user has entered '1' as their choice.

```
PS C:\Users\adity> cd "c:\Users\adity\Desktop\" ; if ($?) { gcc dsa_project.c -o dsa_project } ; if ($?) { .\dsa_project }
```

```
1. Add a student
2. Display student information
3. Search by roll number
4. Show subject toppers
5. Scholarship eligibility
6. Show Failures
7. Show Average Marks in Each Subject
8. Show Distinction Award Students
9. Exit
Enter your choice: 1
```

The screenshot shows the Visual Studio Code editor with a C program named `dsa_project.c`. The code is as follows:

```

291         break;
292     case 8:
293         showDistinctionAwardStudents();
294         break;
295     case 9:
296         printf("Exiting...\n");
297         exit(0);
298     }
299 }

```

The interface includes a sidebar on the left with icons for Explorer, Search, Source Control, and Run and Debug. The bottom panel shows the 'TERMINAL' tab with the following output:

```

6. Show Failures
7. Show Average Marks in Each Subject
8. Show Distinction Award Students
9. Exit
Enter your choice: 1
Enter name: aman
Enter roll number: 4
Enter class: 1
Enter section: d
Enter marks for DDCO: 33
Enter marks for DSA: 32
Enter marks for AFL: 12
Enter marks for SDS: 45

```

The status bar at the bottom indicates the current position is Line 295, Column 20, with 4 spaces, UTF-8 encoding, CRLF line endings, and the C locale. It also shows 'Go Live' and 'Win32' status.

File Edit Selection View Go Run ... Search

dsa_project.c

C: > Users > adity > Desktop > C dsa_project.c > main()

291

break;

292

case 8:

293

showDistinctionAwardStudents();

294

break;

295

case 9:

296

printf("Exiting...\n");

297

exit(0);

...

DEBUG CONSOLE

PORTS

TERMINAL

Code + -

0

0

0

Ln 295, Col 20

Spaces: 4

UTF-8

CRLF

{ } C

Go Live

Win32

3. Search by roll number

4. Show subject toppers

5. Scholarship eligibility

6. Show Failures

7. Show Average Marks in Each Subject

8. Show Distinction Award Students

9. Exit

Enter your choice: 1

Enter name: abhiram

Enter roll number: 3

Enter class: 1

Enter section: s

Enter marks for DDCO: 89

Enter marks for DSA: 88

Enter marks for AFL: 87

Enter marks for SDS: 86

File Edit Selection View Go Run ... Search

dsa_project.c

C: > Users > adity > Desktop > C dsa_project.c > main()

291

break;

292

case 8:

293

showDistinctionAwardStudents();

294

break;

295

case 9:

296

printf("Exiting...\n");

297

exit(0);

...

DEBUG CONSOLE

PORTS

TERMINAL

Code + -

0

0

0

Ln 295, Col 20

Spaces: 4

UTF-8

CRLF

{ } C

Go Live

Win32

3. Search by roll number

4. Show subject toppers

5. Scholarship eligibility

6. Show Failures

7. Show Average Marks in Each Subject

8. Show Distinction Award Students

9. Exit

Enter your choice: 1

Enter name: adi

Enter roll number: 2

Enter class: 1

Enter section: a

Enter marks for DDCO: 89

Enter marks for DSA: 78

Enter marks for AFL: 77

Enter marks for SDS: 67

FileEditSelectionViewGoRun...←→Search

dsa_project.c

C: > Users > adity > Desktop > C dsa_project.c > main()

291

break;

292

case 8:

293

showDistinctionAwardStudents();

294

break;

295

case 9:

296

printf("Exiting...\n");

297

exit(0);

...

DEBUG CONSOLEPORTSTERMINAL

5. Scholarship eligibility
6. Show Failures
7. Show Average Marks in Each Subject
8. Show Distinction Award Students
9. Exit
Enter your choice: 1
Enter name: ajay
Enter roll number: 1
Enter class: 1
Enter section: a
Enter marks for DDCO: 99
Enter marks for DSA: 98
Enter marks for AFL: 97
Enter marks for SDS: 96

1. Add a student
2. Display student information
3. Search by roll number
4. Show subject toppers

Ln 295, Col 20Spaces: 4UTF-8CRLF{}CGo LiveWin32

FileEditSelectionViewGoRun...←→Search

dsa_project.c

C: > Users > adity > Desktop > C dsa_project.c > main()

291

break;

292

case 8:

293

showDistinctionAwardStudents();

294

break;

295

case 9:

296

printf("Exiting...\n");

297

exit(0);

...

DEBUG CONSOLEPORTSTERMINAL

7. Show Average Marks in Each Subject
8. Show Distinction Award Students
9. Exit
Enter your choice: 2

Student Information:

Name	Roll Number	Class	Section	DDCO	DSA	AFL	SDS
ajay	1	1	a	96	97	98	99
adi	2	1	a	67	77	78	89
abhiram	3	1	s	86	87	88	89
aman	4	1	d	45	12	32	33

1. Add a student
2. Display student information
3. Search by roll number
4. Show subject toppers

Ln 295, Col 20Spaces: 4UTF-8CRLF{}CGo LiveWin32

File Edit Selection View Go Run ... Search

dsa_project.c X

C: > Users > adity > Desktop > C dsa_project.c > main()

291 break;

292 case 8:

293 showDistinctionAwardStudents();

294 break;

295 case 9:

296 printf("Exiting...\n");

297 exit(0);

298

DEBUG CONSOLE

PORTS

TERMINAL

Code + - - - ^ X

6. Show Failures

7. Show Average Marks in Each Subject

8. Show Distinction Award Students

9. Exit

Enter your choice: 3

Enter roll number to search: 2

Student Information:

Name: adi, Roll Number: 2, Class: 1, Section: a, Marks: 67 77 78 89

1. Add a student

2. Display student information

3. Search by roll number

4. Show subject toppers

5. Scholarship eligibility

6. Show Failures

7. Show Average Marks in Each Subject

8. Show Distinction Award Students

9. Exit

Ln 295, Col 20 Spaces: 4 UTF-8 CRLF {} C Go Live Win32

File Edit Selection View Go Run ... Search

dsa_project.c X

C: > Users > adity > Desktop > C dsa_project.c > main()

293 showDistinctionAwardStudents();

294 break;

295 case 9:

296 printf("Exiting...\n");

297 exit(0);

298 break;

299

DEBUG CONSOLE

PORTS

TERMINAL

Code + - - - ^ X

7. Show Average Marks in Each Subject

8. Show Distinction Award Students

9. Exit

Enter your choice: 4

Subject Toppers:

DDCO Topper: ajay (Roll Number: 1 Class: 1 Section: a Marks: 96)

DSA Topper: ajay (Roll Number: 1 Class: 1 Section: a Marks: 97)

AFL Topper: ajay (Roll Number: 1 Class: 1 Section: a Marks: 98)

SDS Topper: ajay (Roll Number: 1 Class: 1 Section: a Marks: 99)

1. Add a student

2. Display student information

3. Search by roll number

4. Show subject toppers

5. Scholarship eligibility

6. Show Failures

7. Show Average Marks in Each Subject

8. Show Distinction Award Students

9. Exit

Enter your choice:

Ln 293, Col 48 Spaces: 4 UTF-8 CRLF {} C Go Live Win32

File Edit Selection View Go Run ... Search

dsa_project.c

C: > Users > adity > Desktop > C dsa_project.c > main()

293

showDistinctionAwardStudents();

294

break;

295

case 9:

296

printf("Exiting...\n");

297

exit(0);

298

break;

DEBUG CONSOLE PORTS TERMINAL

4. Show subject toppers
5. Scholarship eligibility
6. Show Failures
7. Show Average Marks in Each Subject
8. Show Distinction Award Students
9. Exit
Enter your choice: 5

Scholarship Eligibility:
Scholarship eligible student: ajay (Roll Number: 1)

1. Add a student
2. Display student information
3. Search by roll number
4. Show subject toppers
5. Scholarship eligibility
6. Show Failures
7. Show Average Marks in Each Subject
8. Show Distinction Award Students
9. Exit
Enter your choice:

Ln 293, Col 48 Spaces: 4 UTF-8 CRLF {} C Go Live Win32

File Edit Selection View Go Run ... Search

dsa_project.c

C: > Users > adity > Desktop > C dsa_project.c > main()

293

showDistinctionAwardStudents();

294

break;

295

case 9:

296

printf("Exiting...\n");

297

exit(0);

298

break;

DEBUG CONSOLE PORTS TERMINAL

4. Show subject toppers
5. Scholarship eligibility
6. Show Failures
7. Show Average Marks in Each Subject
8. Show Distinction Award Students
9. Exit
Enter your choice: 6

List of Students Who Have Failed:
aman (Roll Number: 4) has failed.

1. Add a student
2. Display student information
3. Search by roll number
4. Show subject toppers
5. Scholarship eligibility
6. Show Failures
7. Show Average Marks in Each Subject
8. Show Distinction Award Students
9. Exit
Enter your choice:

Ln 293, Col 48 Spaces: 4 UTF-8 CRLF {} C Go Live Win32

File Edit Selection View Go Run ... Search

dsa_project.c

C: > Users > adity > Desktop > C dsa_project.c > main()

293

showDistinctionAwardStudents();

294

break;

295

case 9:

296

printf("Exiting...\n");

297

exit(0);

298

break;

DEBUG CONSOLE

PORTS

TERMINAL

Code

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7. Show Average Marks in Each Subject

8. Show Distinction Award Students

9. Exit

Enter your choice: 7

Average Marks in Each Subject:

DDCO: 73.50

DSA: 68.25

AFLL: 74.00

SDS: 77.50

1. Add a student

2. Display student information

3. Search by roll number

4. Show subject toppers

5. Scholarship eligibility

6. Show Failures

7. Show Average Marks in Each Subject

8. Show Distinction Award Students

9. Exit

Enter your choice:

Ln 293, Col 48

Spaces: 4

UTF-8

CRLF

{ } C

Go Live

Win32

File Edit Selection View Go Run ... Search

dsa_project.c

C: > Users > adity > Desktop > C dsa_project.c > main()

293

showDistinctionAwardStudents();

294

break;

295

case 9:

296

printf("Exiting...\n");

297

exit(0);

298

break;

DEBUG CONSOLE

PORTS

TERMINAL

Code

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4. Show subject toppers

5. Scholarship eligibility

6. Show Failures

7. Show Average Marks in Each Subject

8. Show Distinction Award Students

9. Exit

Enter your choice: 8

Students Eligible for Distinction Award:

abhiraam (Roll Number: 3) is eligible for the distinction award.

1. Add a student

2. Display student information

3. Search by roll number

4. Show subject toppers

5. Scholarship eligibility

6. Show Failures

7. Show Average Marks in Each Subject

8. Show Distinction Award Students

9. Exit

Enter your choice:

Ln 293, Col 48

Spaces: 4

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FileEditSelectionViewGoRun...←→Search

dsa_project.c

C: > Users > adity > Desktop > C dsa_project.c > main()

293

showDistinctionAwardStudents();

294

break;

295

case 9:

296

printf("Exiting...\n");

297

exit(0);

298

break;

DEBUG CONSOLE

PORTS

TERMINAL

Code + -

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6. Show Failures

7. Show Average Marks in Each Subject

8. Show Distinction Award Students

9. Exit

Enter your choice: 8

Students Eligible for Distinction Award:

abhiram (Roll Number: 3) is eligible for the distinction award.

1. Add a student

2. Display student information

3. Search by roll number

4. Show subject toppers

5. Scholarship eligibility

6. Show Failures

7. Show Average Marks in Each Subject

8. Show Distinction Award Students

9. Exit

Enter your choice: 9

Exiting...

PS C:\Users\adity\Desktop>

Ln 293, Col 48

Spaces: 4

UTF-8

CRLF

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Go Live

Win32