DEBUGGING

Debugging a C++ file involves the process of identifying and resolving errors, also known as bugs, in your code. There are several tools and techniques you can use to debug C++ code effectively.

Debugging screenshots:

```
Enter your choice
1
[Detaching after vfork from child process 1709]
sh: 1: cls: not found

Breakpoint 2, student::getdata (this=0x7fffffffe920) at main.cpp:37
37              cout<<"Enter student's roll number: ";
(gdb) n
38              cin>>rollno;
(gdb) n
Enter student's roll number: n
40              cout<<"Enter student's name: ";
(gdb) n
41              cin.ignore();
(gdb) print num
$1 = num
(gdb) break main.cpp:123
Breakpoint 3 at 0x555555556cae: file main.cpp, line 123.
(gdb) r
The program being debugged has been started already.
Start it from the beginning? (y or n) n
Program not restarted.
(gdb) next
42              cin.getline(name,50);
(gdb) n
44              cout<<"\n\nEnter Student's Marks"<<endl;
(gdb) n
Enter student's name:

Enter Student's Marks
45              cout<<"All marks should be out of 100";
(gdb) n
47              cout<<"\n\nEnter marks in English: ";
(gdb) n
All marks should be out of 100

48              cin>>eng_marks;
(gdb) n
50              cout<<"Enter marks in Math: ";
(gdb) n
51              cin>>math_marks;
```

```
Breakpoint 1, student::calculate (this=0x7fffffffe920) at main.cpp:24
24              average=(eng_marks+math_marks+sci_marks+lang2_marks+cs_marks)/5.0;
(gdb) c
Continuing.
Enter marks in English: Enter marks in Math: Enter marks in Science: Enter marks in Second language: Enter marks in Computer science:
[Detaching after vfork from child process 1710]
sh: 1: cls: not found
Student's record has been created Welcome to Student Registration Management System

MENU

1. Create a newstudent record
2. Search student record
3. Display all students records
4. Delete student record
5. Modify student record
6. Exit

Enter your choice
[Detaching after vfork from child process 1711]
sh: 1: cls: not found

Breakpoint 2, student::getdata (this=0x7fffffffe920) at main.cpp:37
37              cout<<"Enter student's roll number: ";
(gdb) c
Continuing.
Enter student's roll number: Enter student's name:

Enter Student's Marks
All marks should be out of 100

Breakpoint 1, student::calculate (this=0x7fffffffe920) at main.cpp:24
24              average=(eng_marks+math_marks+sci_marks+lang2_marks+cs_marks)/5.0;
(gdb) n
25              if(average>=90)
(gdb) c
Continuing.
Enter marks in English: Enter marks in Math: Enter marks in Science: Enter marks in Second language: Enter marks in Computer science:
[Detaching after vfork from child process 1712]
sh: 1: cls: not found
```

```
Reading symbols from a.out...
(gdb) info local

No frame selected.

(gdb) info break

Num     Type           Disp Enb Address            What

1       breakpoint     keep y   0x0000000000002cae in main() at main.cpp:123
2       breakpoint     keep y   0x00000000000026b0 in student::getdata()
                                                   at main.cpp:37
3       breakpoint     keep y   0x00000000000025f6 in student::calculate()

                                                   at main.cpp:24
(gdb)
```