PROGRAMMING PRACTICES
MINI PROJECT

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1 Introduction

This project serves as one stop destination for all your needs related for competitive examinations. The current scenario in competitive world shows that the competition is increased too much whether it is in the field of JEE,NEET,Clat or it is about any higher engineering examinations like GATE.The AIM of this interface is to cater the candidates with all possible and the best resources for the respective competitive examinations they are going to phase.

2 Methodology

The project is made up using the cpp programming language.This report also includes the other things as well like the ***profiling*** and ***debugging*** operations perfomed on the code and the respective results obtained.

2.1 Flow of code

The flow of the code goes in the way that:
1. There is a prompt for the category to choose for.
2. On the basis of chosen category **viewBookdetails** function is called. Which displays the different sub available int categories.
3. Then prompt is there to enter integer digit to choose which subject need to choose.
4. Then on the basis of integer input the **viewSubDetails** function is called.
5. Then it list all the best book resouces to follow for that subject.
6.Then further either you can exit the terminal by entering 0 or can check for any other subject as well.
7.This is how the code goes...

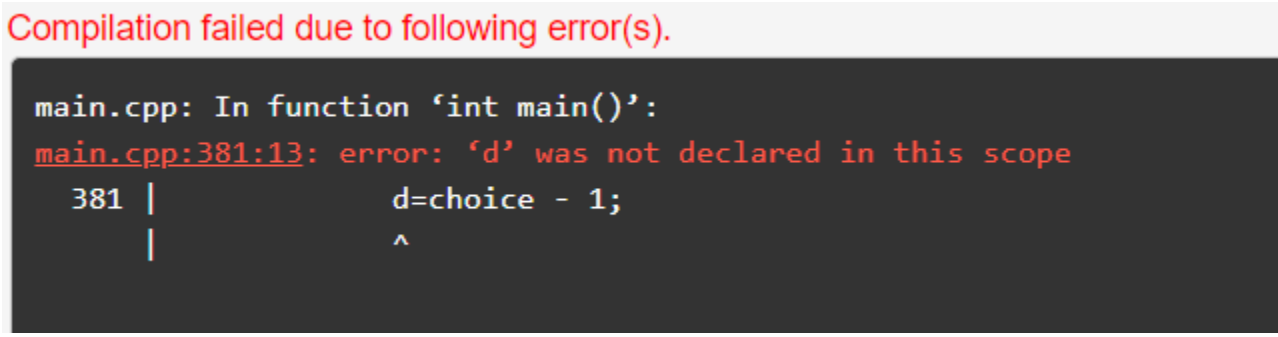
3 Scalability

This interface is a basic one but this can be scale to large scale by adding many more features such as adding tests,youtube resources, teaching assistants,doubt resolver and many more facilities like that...

4 Debugging

The process of identifying and removing errors from code is debugging.
Here is how the debbuging process was applied on the code and the results i got:

1: It shows that compilation was not successfull due to d was not declared in scope and also not defined properly



(a) Image 1

2: It shows on debugging the d was declared in the another scope and on entering value of d the result getting was not the expected one.

```
371             cout << "Enter the Category (Please Enter the Corresponding Digit)&(0 t
o exit): ";
(gdb) n
372             cin >> choice;
(gdb) n
Enter the Category (Please Enter the Corresponding Digit)&(0 to exit): 2
374             if (choice < 1 || choice > bookResources.size())
(gdb) n
383                 viewBookDetails(bookResources[d],d);  // calls the view book details
 function
(gdb) n
cat1: JEE
1. Physics
2. Chemistry
3. Maths
```

Figure 2: Image 2

5 Output

The generated output on running the code:

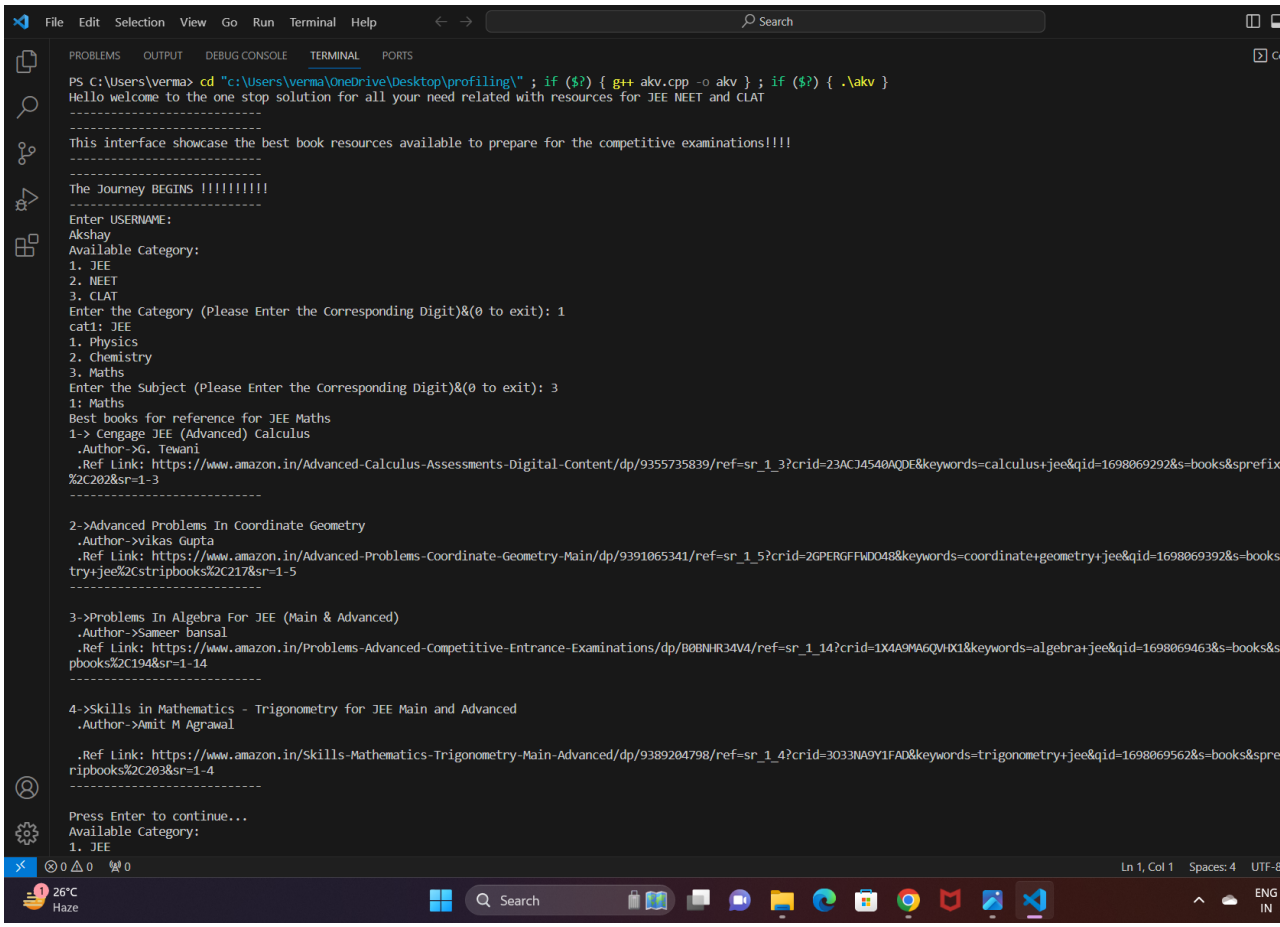


Figure 3: Image 11

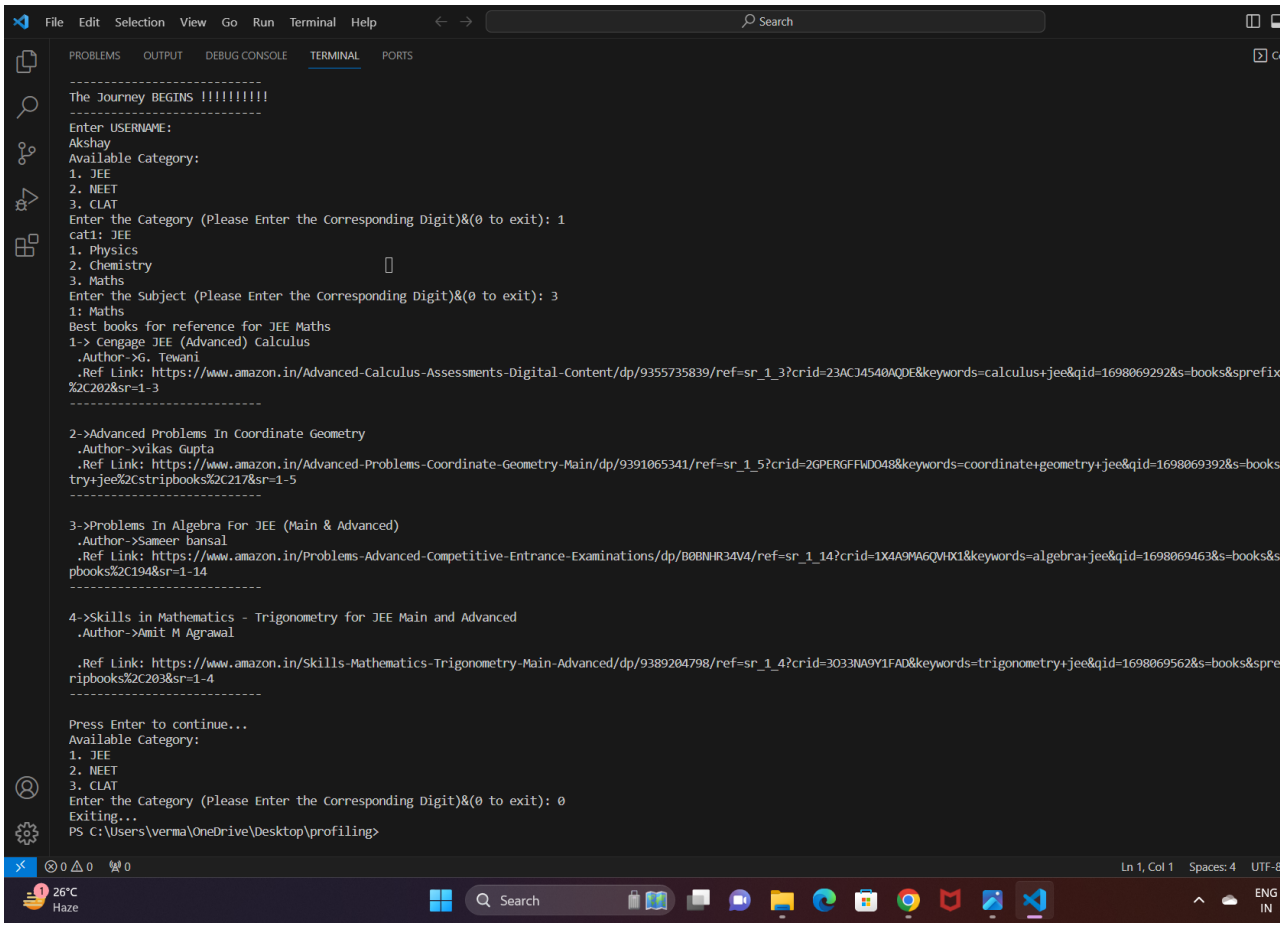


Figure 4: Image 12

6 Profiling

On profiling using different ***gprof*** commands got the following flat profile and call graph:

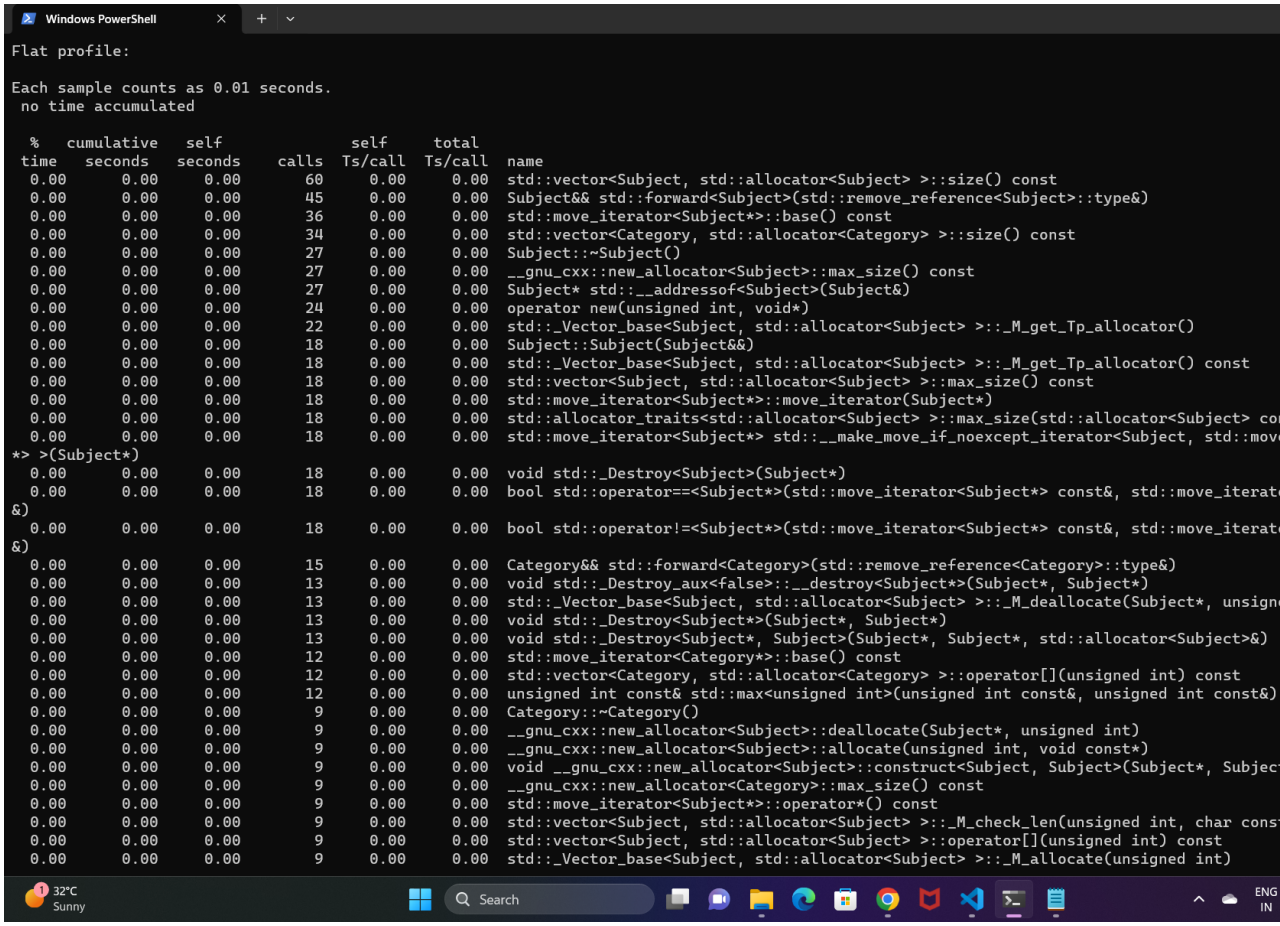


Figure 5: Image 3

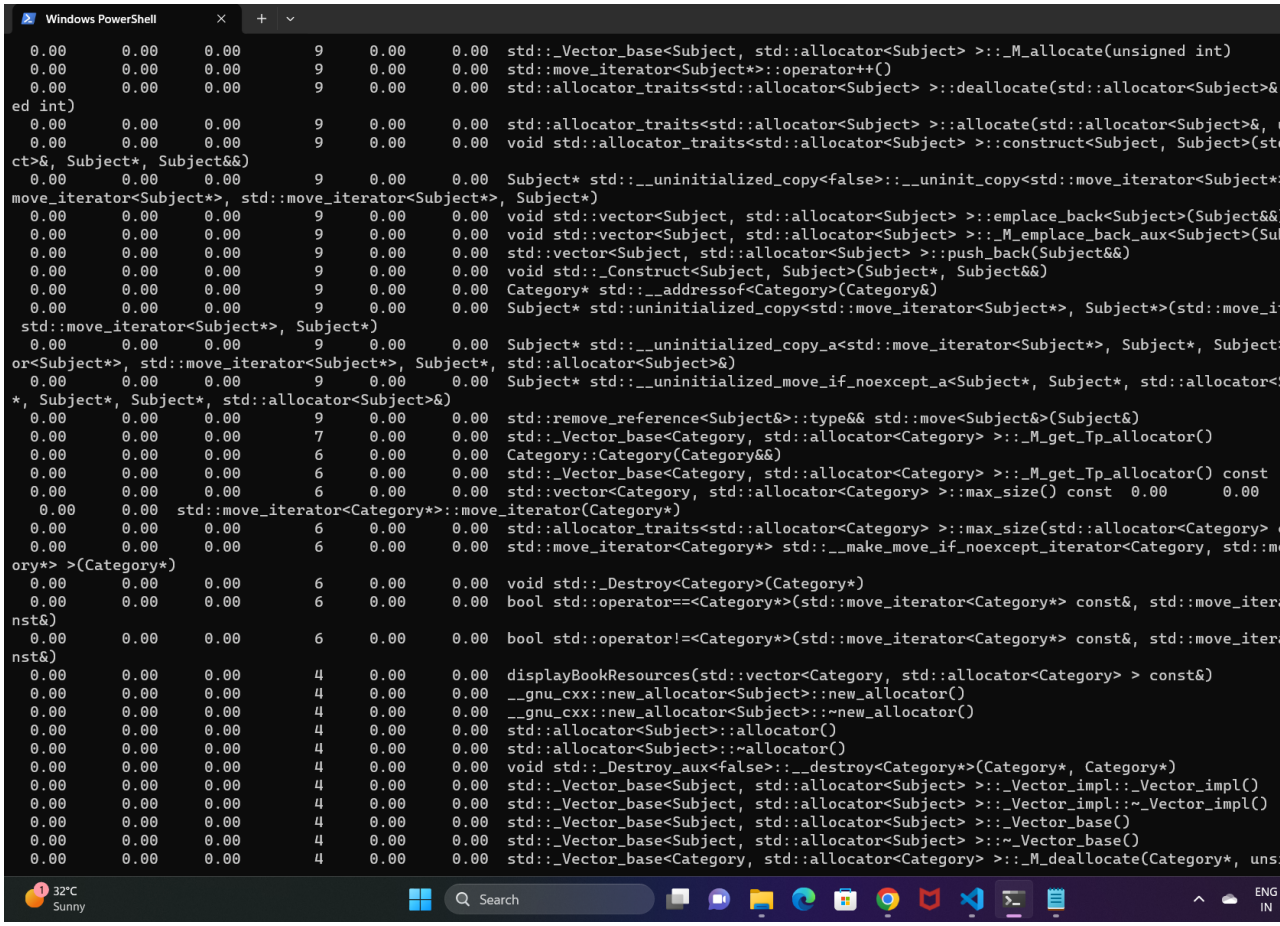


Figure 6: Image 4

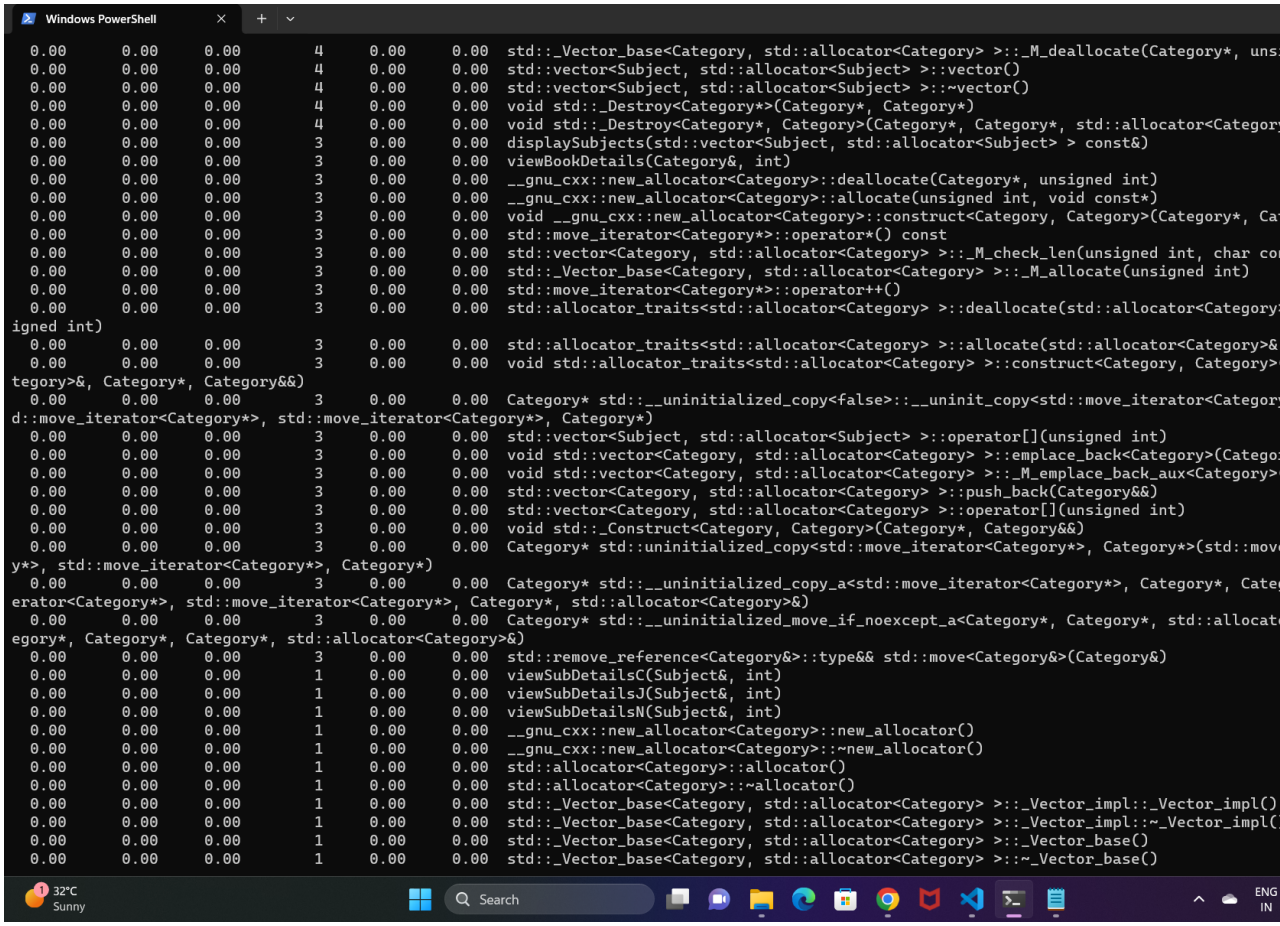


Figure 7: Image 5

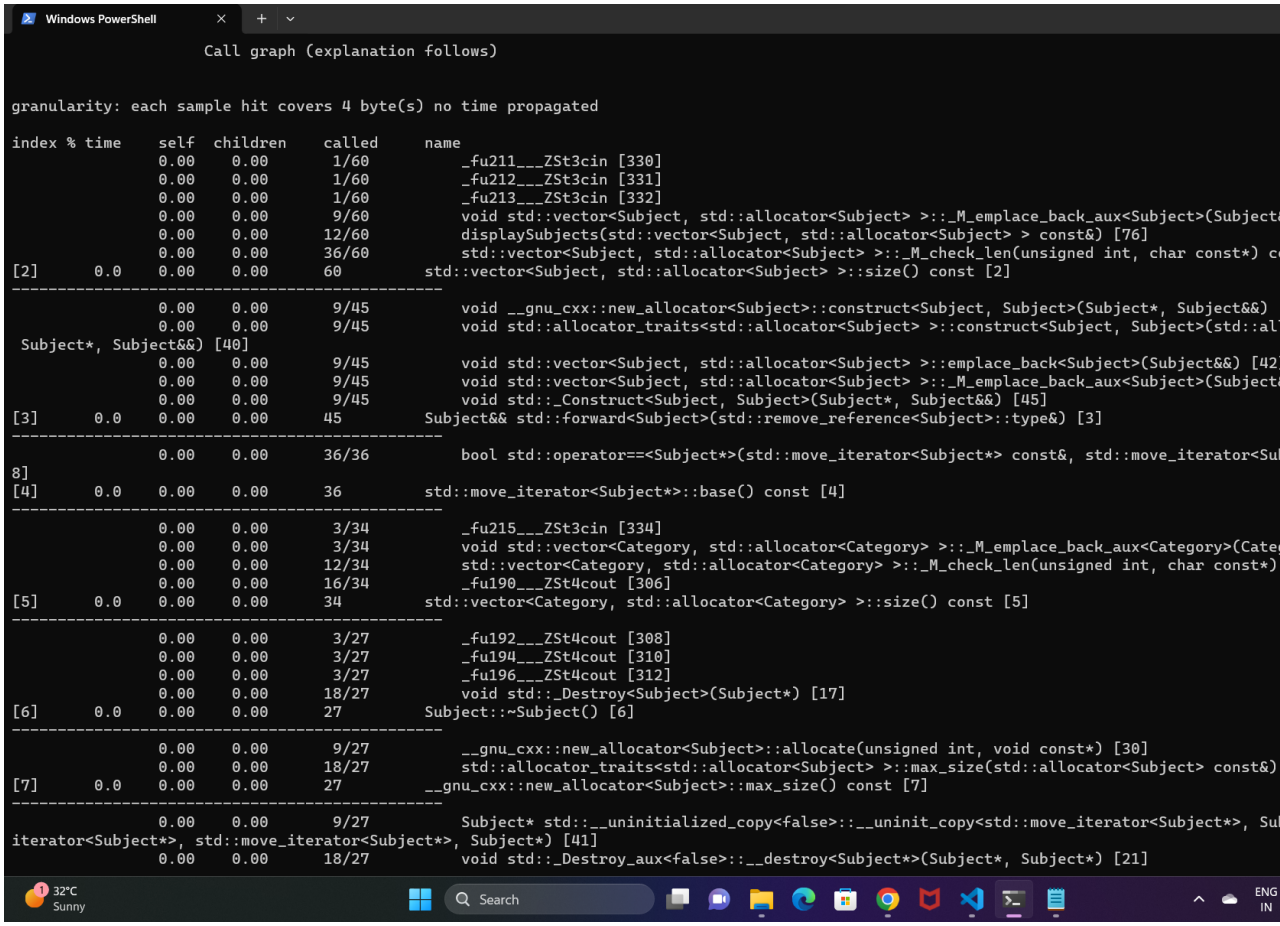


Figure 8: Image 6

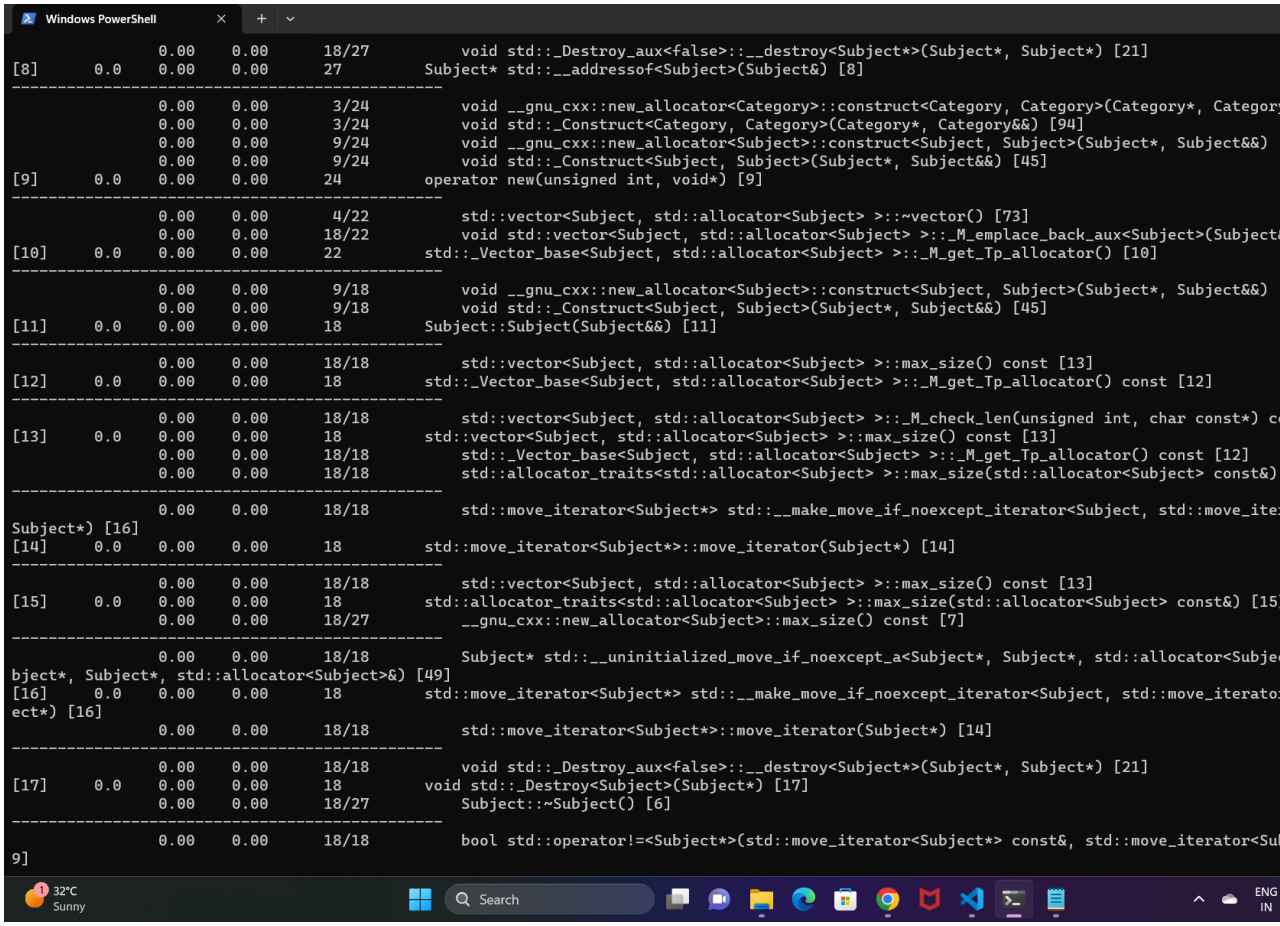


Figure 9: Image 7

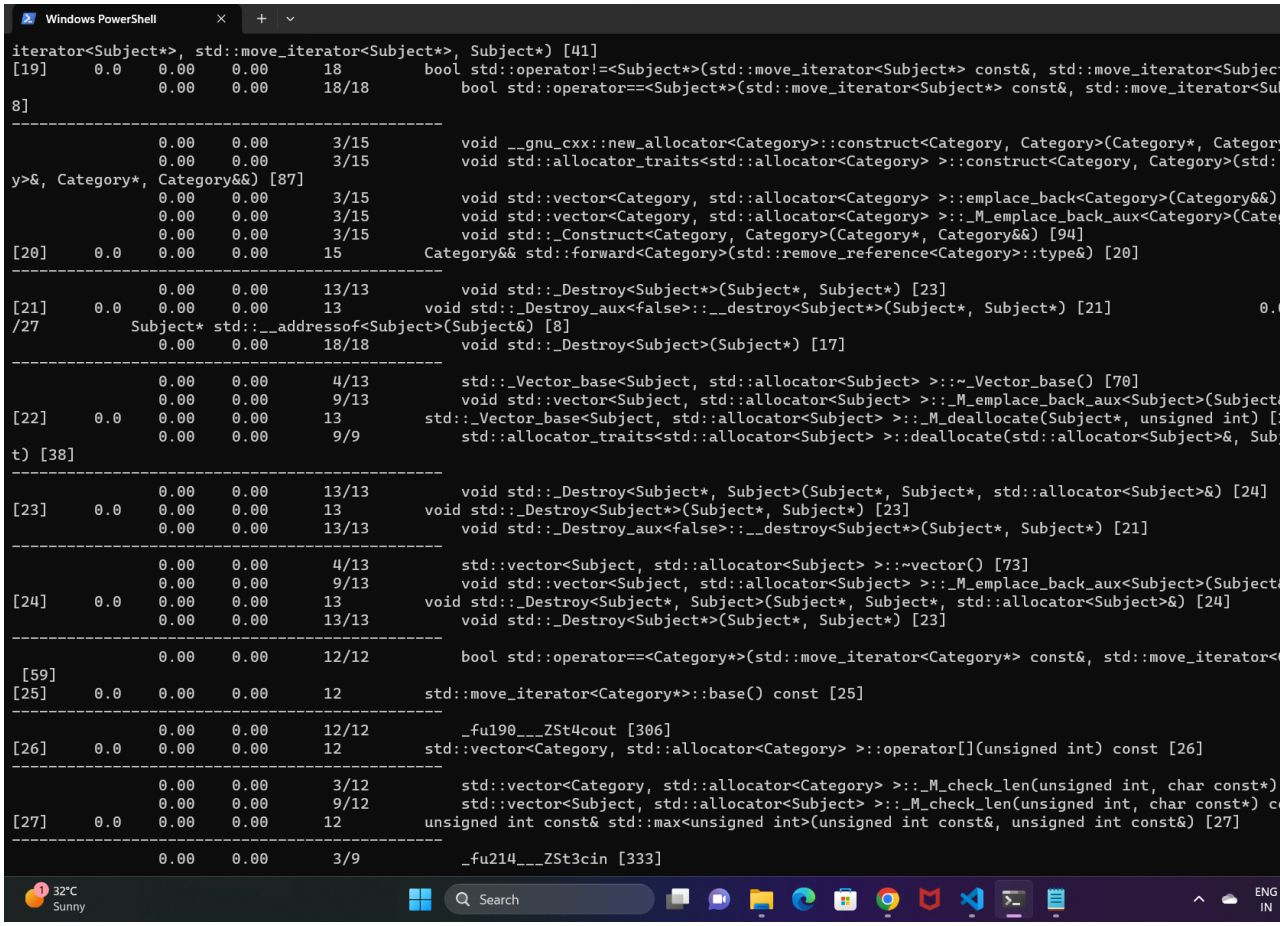


Figure 10: Image 8

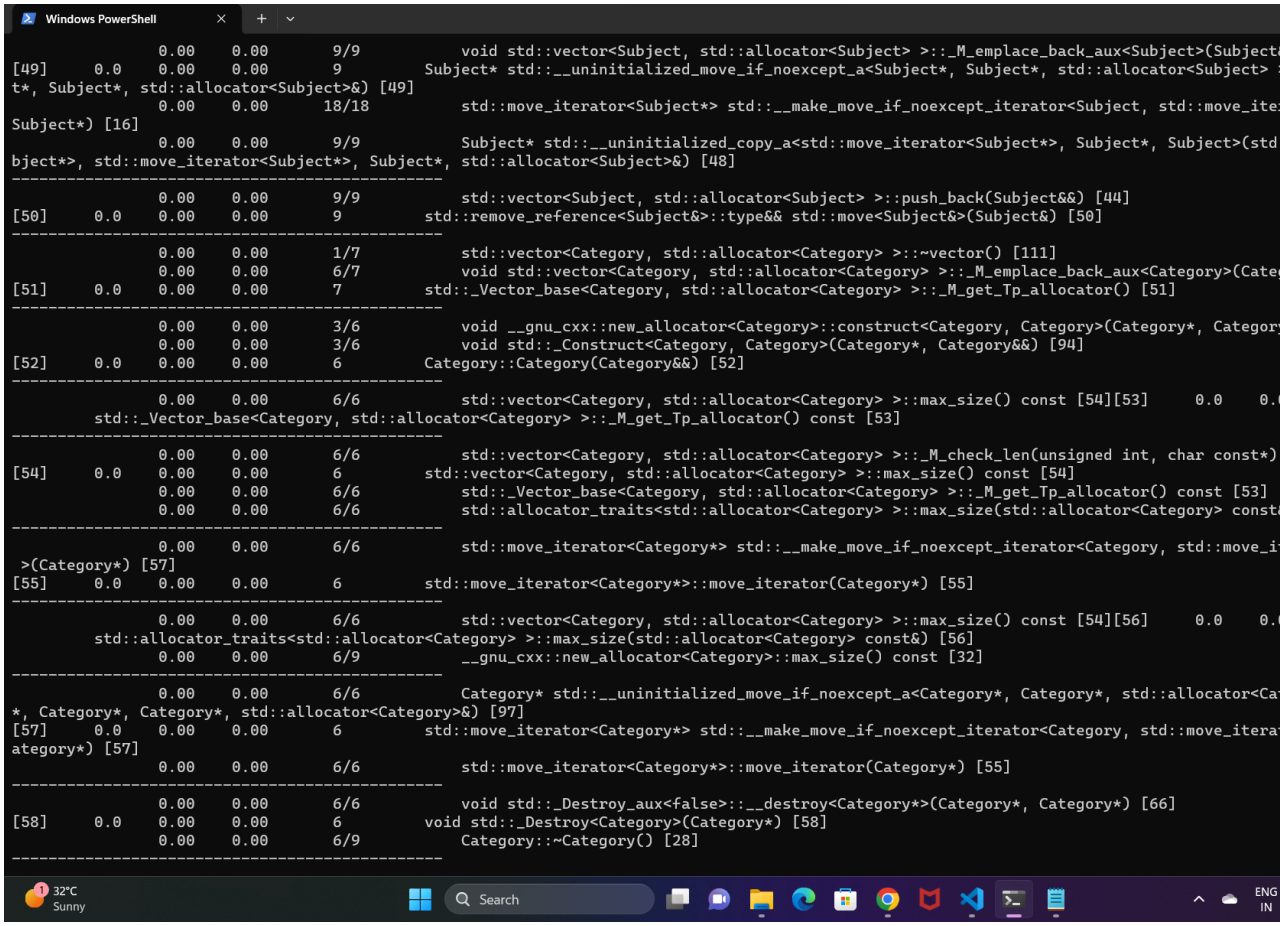


Figure 11: Image 9

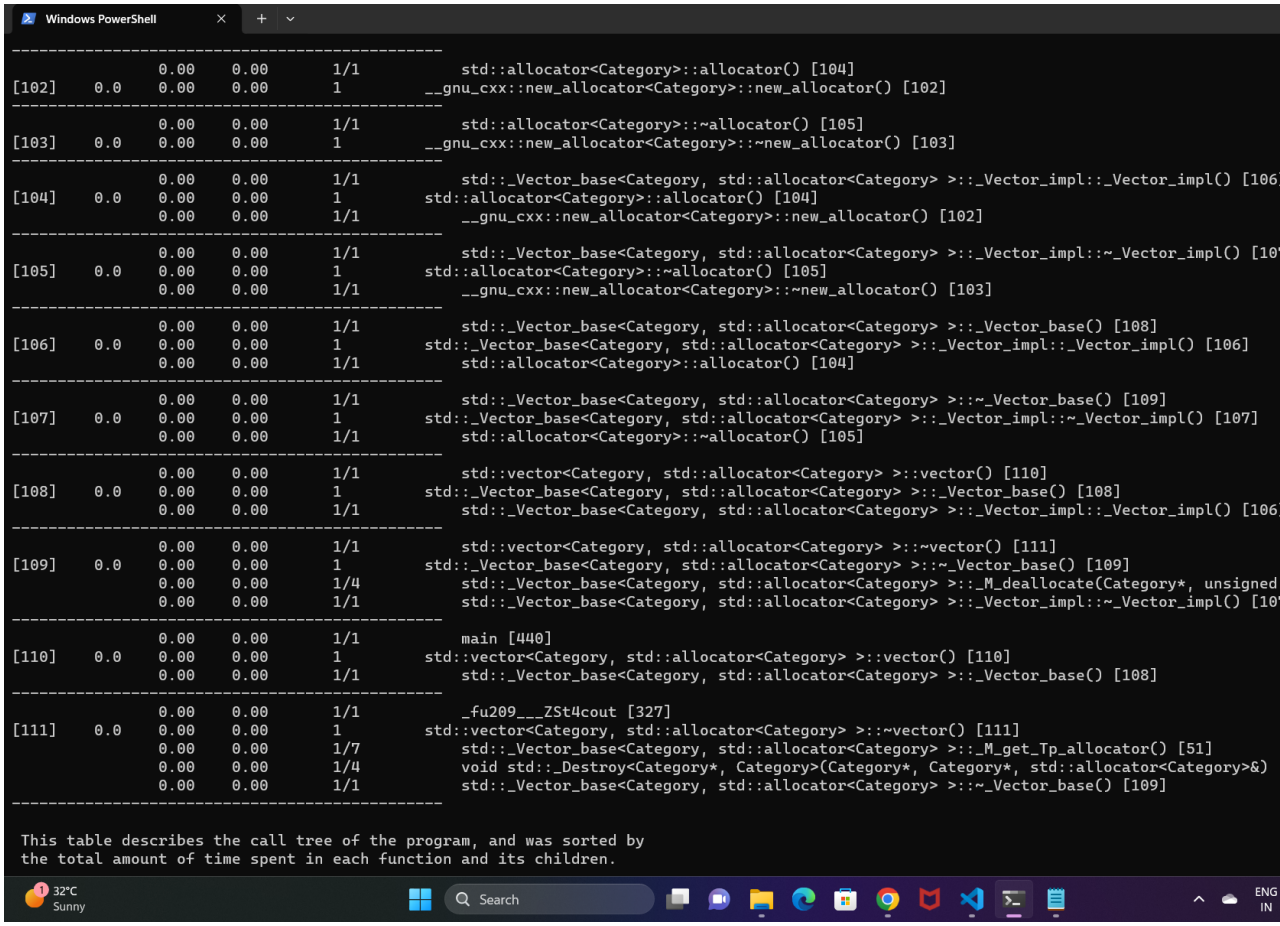


Figure 12: Image 10