**Interview:**

**\*\*General Question Set\*\***

**1. What is your current program of study/profession?**

Studied software engineering/ freelance game development

**2. How much experience do you have in this field of study/work?**

Currently in his 3rd academic year and has been freelance programing for about 3 years

**3. Do you enjoy your studies/work? If yes, which part interests you the most? If no, what do you not like about it?**

Yes

Enjoys problem solving,

Learning new stuff daily.

Enjoys self optimization for better proficiency and effectiveness

**4. What tasks or jobs would you say you mostly do in your field of study/work?**

Programming assignments in various languages, Projects and reports,

Program deliverables and optimizing the product for performance

**5. Can you tell me some of your likes and dislikes and what you enjoy doing?**

Enjoys endless possibilities and and that there is always room to improve

Dislike monotonous and tedious tasks and also dislikes uncertainty.

**6. What are your values when it comes to your field of study?**

Integrity and determination and a focus on self improvement.

**7. What occupation are you aiming towards, if you are not already employed?**

Game programmer at a game studio. Work on day to day programming tasks focused on game mechanics and user interaction with the game.

**8. What skills have you been developing which you feel will be the most important for this future career?**

Technical skills: Data structures and algorithms, knowledge in relevant maths skills, game engines.

Soft skills: Thinking on one foot, Collaboration, Patience, A focus on outside the box thinking.

**9. What are your current goals for yourself? If you have none, do you think you will have some in the future?**

Want to publish his own game and learn how to make websites. Work on health, network.

**10. Do you prefer to use the hand-held calculator or computer calculator?**

Prefers handheld over computer due to the feel of the device and lack of clutter on the computer.

**11. Do you have experience using the command line of your computer? And using a calculator on your computer?**

Yes to both, fluent in cli and hand held calculator to remedy complex problems

**12. Are you comfortable enough to use a calculator without a Graphical Interface and just with the command line?**

Yes, However, I prefer graphical but can use both.

**13. Currently, my team and I are designing a scientific calculator and we are hoping to get your input to improve our design. How much experience do you have with a Scientific Calculator, and how often do you use one?**

Quite a bit of experience, used all through college and universities for various math based classes. Uses his calculator approximately 5 times a week.

**14. Are there any functions you feel should be included in a Scientific Calculator but aren’t?**

Mostly satisfied with what's been offered, I would like more support for complex integrating functions.

**15. Does your operating system provide any calculator? if yes, Do you think its functions are enough for you?**

Yes, however its not enough due to lack of functions like 3d maths and statistical math.

**16. What function/ functions do you usually need from a Scientific Calculator most?**

Any functions like trigonometry, log and factorials and matrix operations, exponentials

**17. Do you think you will use a scientific calculator in your field of study and in your future career. If yes, what will some of your uses for it, if no, do you think you would use for personal use?**

In future career, would use it for operations like 3d maths, trig, log operations and any linear algebra, satistics.

**18. Do you use Scientific Calculator during your work or your exams or your course projects or anything else?**

Yes, much more after the start of freelancing career

**19. Our calculator will include the functions for exponential functions, arccos, log, Gamma, Mean Absolute Deviation, Standard Deviation, sinh and a special exponential function which allows variables and expressions for the base instead of natural numbers. Can you tell us which function you would find most usable for yourself? Why?**

Apart from functions 4 and 5, all functions would be used frequently. Most inputs would be a mix of numbers and expressions. Would like to solve entire expressions without having to do preliminary maths at every step.

**20. If no, is it because you don’t see yourself using any of the functions mentioned, or some other reason?**

Apart fro the func mentioned above, i am mostly unfamiliar with the functions,

**21. How familiar are you with these functions and how they work?**

On a scale of 1 to 10, my familiarity would be around 8. With log being the most familiar function.

**22. Do you think it is necessary that a Scientific Calculator should take a function as input?**

Yes, I would like my calculator do the most work, freeing me from menial and preliminary maths.

**23. Are there any features you would like to see included in this calculator that you think would make the design better?**

I have a huge preference for calculators with suggestions and predictive stuff. Would prefer a simplistic minimal GUI. Multiple ways to take input, step by step analysis of calculations and detailed solutions

**24. What should the precision for a Scientific Calculator be?**

Prefers at least 7-8 significant digits for fractions. No rounding.

**25. When using a calculator do you prefer to receive a step by step solution or simply a final answer?**

Step by step to examine the logic and dressing behind the soln

**26. Do you think a history is essential for a calculator? If yes, how big should the history be?**

Previous 7-8 CALCULATIONS, to effectively error check. Its easy for me to forget what i was upto so tracing back my steps helps tremendously.

**27. Do you have any positive experiences with a Scientific Calculator, if yes please elaborate?**

Enjoy show it saves time and can have multiple applications varing from study and work. In a nutshell Trig and log are essential and makes life simpler

**28. Do you have any negative experiences with a Scientific Calculator, if yes please elaborate?**

Sometimes, its not clear the mode the calculator is in and can cause a lack of clarity. For example, i could be calculation something in degree mode where else the answer was needed in radian, And the ergonomics of the calculator can get in the way, there have been occasions when the turn of button was pressed by mistake due to it being near to the backspace button and it shuts off without warning erasing the history.

**29. In your opinion, what would improve your experience when using a Scientific Calculator on a computer? What features would improve its usage for you?**

It should be quick, should be more engaging and easy to navigate. A predefined template for most used expressions which would be otherwise tedious to calculate for eg b^2 - 4ac, could use a template where just inputting values of a , b and c should generate the result.

**30) What kind of GUI would you prefer for a scientific calculator?**

Nothing too distracting basic black and white interface and color coded for functions and errors( used purposefully)

**31) Would you prefer a browser based app or app based app?**

Would prefer a browser based app for ease of use and convenience and for example symbolab.

**Summary of Interview**

This interview questions were designed by using funnel model which starts with general questions and ends towards more specific questions relating to the project during the course of interview. The questions are planned ahead and agreed by all the members of the team. The answers provided insights into what kind of functionalities could be applied to our project. the interview was conducted over zoom in a semi-proximal formal and the structure of the interview was semi-structed with many questions being open ended.

**Analysis of Interview**

* Interviewee prefers Digital calculators over handheld
* Interviewee will not be using most functions from the calculator on a regular basis. Although he may use them at some point in future.
* Interviewee prefers it to support matrix calculations and 3d maths.
* They prefer a simplistic minimal GUI that is color coded for specific inputs/outputs
* They would like to have a step by step soln with calculation history
* They would prefer support for using complex functions as inputs
* The app needs to be portable and precise.