**A Level computer Science**

Component 3

Physics Homework App

Perhaps a Logo / Picture

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# Chapter One: Analysis of the problem

## Introduction

## Problem Identification

While studying Physics at A-Level, we used multiple websites to do our homework. This was due to the fact that all of the different websites had their own flaws. The main flaw that I found is that no website that is available to us allows for both calculations and long answers to be entered as answers.

This is an example of a website allowing to answer a calculation question. As you can see in this example, you can only enter a value as an answer and then the website tells you if it is right or wrong. This is a big problem because, if you get the question wrong, you and your teacher will not be able to see where the problem in the calculation is and how to fix it.



As shown in this example, this particular website allows for a long answer to be entered as an answer. However, the limitation of this is that when you are marking your answer, it can only be marked as right or wrong. The solution to this problem is to allow the student to give their answer a mark, by checking their answer against the mark scheme, out of the number of marks that the teacher set. This will allow the student to see what they would score in the real exam.

## 1.3 Possible Computational Methods

## 1.4 Stakeholders analysis

1.4.1 Stakeholder Introduction

The demographic for my project is for teachers and students in the Physics A-Level. For my stakeholders I picked one Physics teacher and three Physics students. The teacher stakeholder is {INSERT LATER} and my student stakeholders are Ali Haider, {INSERT REST LATER}.

I asked each group of stakeholders seven questions. I asked the teacher group the following questions:

1. What resources do you currently use to set physics homework?
2. What are some good features of the current resources that you use?
3. What are some bad features of the current resources that you use?
4. If a new homework website was made, what would you like to see included in it?
5. As a teacher, what are the biggest challenges when setting and marking homework?
6. What would make the website easier to navigate for you?
7. Anything you would like to add that wasn’t included in the questionnaire?

1.4.2 Stakeholder Interview

1.4.3 Stakeholder Conclusion

## 1.5 Research of solutions for similar problems

*How they work?*

*Potential features/components/approaches that may be borrowed? why?*

## 1.6 Hardware and software requirements

Hardware

Software

## 1.8 The requirements of the solution

## 1.9 Features of the solution

## 1.10 Success Criteria

## 1.11 Limitations of the solution