OCR GCE A

COMPUTER SCIENCE PROJECT

H446-03

Name : <INSERT NAME>

# H446-03 – Project CONTENTS

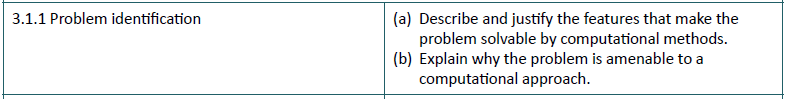
# A. PROJECT IDEAS

The purpose of this document is to identify ideas for your practical programming project to start in the new year. You should identify at least 3 ideas for a project. These will then be discussed with your teachers to agree a suitable project to initiate in Jan 2017. This is a significant decision as the project represents 20% of your final mark, so please give this significant thought over your holidays. Try to choose a subject/area that you are passionate about as this project will be hard work!

The key steps in your projects will be to

* Analyse
* Design
* Implement
* Testing
* Evaluate

Consider this first section of the OCR specification for the Practical Programming Project:



**Read the guidance online at the OCR website and in the information shared with you via the shared drive. This will help you understand what is required for your project and therefore how to select appropriate project ideas.**

**Example Sample Projects**

Projects require a graphical user interface (GUI), a business layer (i.e. the majority of the software code) and a Data layer. It is expected that you will use your knowledge and understanding gained during you’re a level to create your practical project. For example, you will use a database to store and manage information.

A number of example projects are described below.

|  |  |
| --- | --- |
| Starbuck Coffee Shop | An application to manage the purchase of drinks at a coffee shop. Different types of drinks can be purchased by different types of customers. For example, a returning customer may obtain a 10% discount on the final price of their purchased drink. |
| South Tyneside College Enrolments | An application to manage the enrolment process of students at a college. Students enrol for different courses taught by different teachers. |
| Teacher/Student Assessment Tracker System | An application to track the grades of a number of students in a number of classes. Access is granted to either Admin, teachers or students in a number of ways. Students can view the information, teachers can analyse the information and admins can add/edit/delete information. |
| Fun run |  |
| Arrivals and Departures Board | An application to run an arrivals/departures board. For example, an airport or train station. |
| Stock control applications for Retail | Create an application that can manage stock control for a retailer. Orders can be taken from customers and stock dispatched and adjusted. |
| A game (find link to games) | Create your own game. |
|  |  |

Information Required at this stage:

|  |  |
| --- | --- |
| Description of the project | High level description of the software application.  What does it do?  How will it do it? |
| Clients/Stakeholders | You MUST have at least one user or stakeholder. This is the person(s) who would use your application in ’real life’. They will help you define, design and develop the solution. This could be a teacher and/or a pupil.  Describe who and how they will use the software? |
| Software Development Language(s) | What software language will your project use?  Will it use more than one? |
| Opportunities for Inheritance/Polymorphism? | Including objects that are inherited or polymorphic will help with generating a more complex project. It also uses knowledge and understanding gained during the theory sections of the A Level.  e.g. Access levels (Student/Teacher/Admin) or Customers (Home/Business) |
| Data Storage | Use knowledge and understanding gained during the theory sections of the A Level.  Is the DBMS free and easily accessible.  Type of Database. E.g. SQLite or MySQL or Access |
| Complexity | Why is this project sufficiently complex? |
| Why is this idea amenable to computational methods? | Once you have selected the appropriate project idea, you will need to justify the selection. One aspect of this justification is why computational methods will help.  Consider the following: Ease of use/Does it save time/Accuracy of data entry/Enhanced Data analysis/ Enhanced Record Keeping/Other |
| Research | Are there any existing solutions to similar problems? Light touch at this stage. |
| Any additional information | Capture any other information here to help decide whether this is a valid project to take forward. |
|  |  |

# IDEA ONE:

|  |  |
| --- | --- |
| Description |  |
| Clients |  |
| Software Development Language |  |
| Opportunities for Inheritance/Polymorphism? |  |
| Data Storage |  |
| Complexity justification |  |
| Why is this idea amenable to computational methods? |  |
| Research |  |
|  |  |

# IDEA TWO:

|  |  |
| --- | --- |
| Description |  |
| Clients |  |
| Software Development Language |  |
| Opportunities for Inheritance/Polymorphism? |  |
| Data Storage |  |
| Complexity justification |  |
| Why is this idea amenable to computational methods? |  |
| Research |  |
|  |  |

# IDEA THREE:

|  |  |
| --- | --- |
| Description |  |
| Clients |  |
| Software Development Language |  |
| Opportunities for Inheritance/Polymorphism? |  |
| Data Storage |  |
| Complexity justification |  |
| Why is this idea amenable to computational methods? |  |
| Research |  |
|  |  |