BTEC Assignment Brief

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| Qualification | Pearson BTEC Level 3 National Extended Diploma in Computing  |
| Unit or Component number and title | 23 |
| Learning aim(s) (For NQF/RQF only) | B and C |
| Assignment title | Assignment 2 - Bristol Canteen online ordering system  |
| Assessor | Enter Name of Assessor |
| Hand out date | 12 December, 2022 |
| Hand in deadline  | 06 January, 2023 |
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| Vocational Scenario or Context | Bristol City College is looking for some help from some of the top students in the computing department. Your skills in systems analysis and design have been recognised

Due to COVID the canteen has closed but can allow orders to be sent through the web and customers can come and pick it up. You have been asked to design a food ordering system as a mobile app and website.

The canteen manager has requested that you carry out focus groups with the key stakeholders (the customers and canteen kitchen staff) to investigate the user requirements. The stakeholders are also required to test the online payment portal.

The online system should be easy to use, capture all of the required information and link to an online database to store orders, process payment and produce an order receipt or ticket for the canteen.

You have a 1 to 2 months of time to produce a prototype.  |
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| Task 1 | You are now required to develop a solution for the Bristol Canteen. You can work in a team of 45 people (list in your report who you worked with) but you must each individually produce your own report and project plan. Your project manager requires from this report

Define the problem statement (you can discuss this as a team) by providing

A problem statement

Carry out a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis

Then as a team you must carry out requirements gathering, from key stakeholders, and analysis, however in your individual reports you must show evidence of these documents and your analysis

Create a questionnaire for this interview so that you can understand what are the key features (User Interface, database etc) and the nice to have features

Arrange a meeting with the canteen manager and ask him some of these questions

With your team make sure you have understood all the requirements by discussing them in detail (before you start the poker planning, next stage)

A project plan where you need to plan the project (as a team) using SCRUM poker planning and using Trello (You will need to take screen shots of this completed board as evidence of your planning)

Using the information gathered from before break the key features down into stories

It must show everything related to the project requirements gathering, design, analysis, implementation and testing of each feature

Each story must not take more than a day maximum.

Plan all the stories into 4, 1 week sprints.

Along with evidence of the poker planning, evaluate what kind of systems methodology you are going to use for this project Waterfall, Agile, Spiral, Rapid Prototyping. Say why you chose one over the others.

Arrange a meeting with your project manager in your team to discuss why you chose to use these tools, systems methodology etc. Document this so you can show what feedback you were given.

Design Using Data flow diagrams and Entity Relationship diagrams plan out the system. What are the main entities What data stores are needed Provide and evaluation of why you are using these design tools and not some other ones you know about. For this evaluation you may want to discuss how other projects have been successful or not with certain tools and techniques.

Then using Use Case Diagrams and UML diagrams plan out what the main functions of the system are and how the code might look e.g. Food class, customer details class, payment class.

For both these stages in design provide an evaluation of why you are using these design tools.

A visual design is also required that should show how you want your ordering system to look. Draw at least 3 screen designs.

At the end of the project (you will build a version of this in class so you have something to compare it to) you must then evaluate

How well did your project meet the requirements

How much testing was done in your project

What were the technological constraints

Did you choose the correct features to develop first

How well did you work together as a team, what issues were there, what would you do differently next time

Did you manage your time and planning well

Were your investigation techniques thorough enough

What was your own behaviour and the impact on the systems outcome, including professionalism, etiquette, supportive of others, timely and appropriate leadership, accountability.  |
| Checklist of evidence required  | Evidence of trello or SCRUM board showing the project timescale with stories organised into 4, 1 week sprints Questionnaire and evidence of requirements gathering

Discussion of how the SCRUM planning went why you decided on certain stories and how long they would take Evaluation of why you chose certain systems methodology tools (DFD, ERD, UML, USE CASE)

Evaluation of why you chose certain systems methodology over others (Agile etc)  |
| Criteria covered by this task: |
| Unit/Criteria reference | To achieve the criteria, you must show that you are able to: |
| 23 / P3 | Define a problem statement for an identified scenario.  |
| 23 / P4 | Develop a solution to a computing problem, using appropriate systems methodologies.  |
| 23 / P5 | Review the solution to a computing problem, considering feedback from others and identifying possible improvements  |
| 23 / M2 | Justify the choice of systems methodology tools and techniques used to provide a solution to a computing problem.  |
| 23 / M3 | Assess potential improvements to the solution in relation to the problem statement.  |
| 23 / D2 | Evaluate the process of applying a systems methodology to a computing problem in order to develop a proposed solution.  |
| 23 / D3 | Demonstrate individual responsibility and effective self-management in the application and review of systems methodologies to identify and develop a solution to a problem.  |
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| Sources of information to support you with this Assignment | Example of how to write up project httpscityofbristol-my.sharepoint.comwgpersonalbsmith\_cityofbristol\_ac\_ukEeRIIWK2gztNhjZiQrJaSskBB2nS\_ySiUVKRGPGd4qR-\_weRrVMCb

Provides a good overview of system methodology httpwww.tutorialspoint.comsdlcsdlc\_overview.htm

Provides an overview of system analysis and design methodology httpswww.techopedia.comdefinition3983structured-systems-analysis-and-design-method-ssadm

Access to various system analysis presentations httpwww.slideshare.netmrmwood39-techniques-and-tools-for-systems-development  |
| Other assessment materials attached to this Assignment Brief | *e.g. work sheets, risk assessments, case study* |
| **FOR L1/2 FIRSTS ONLY:** If you have not achieved the Level 2 criteria, your work will be assessed to determine if the following Level 1 criteria have been met.  |
| To achieve the criteria, you must show that you are able to: | Unit | Criterion reference |
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