**BTEC Assignment Brief**

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| **Qualification** | | Pearson BTEC International Level 3 Certificate in Information Technology  Pearson BTEC International Level 3 Subsidiary Diploma in Information Technology  Pearson BTEC International Level 3 Foundation Diploma in Information Technology  Pearson BTEC International Level 3 Diploma in Information Technology  Pearson BTEC International Level 3 National Extended Diploma in Information Technology |
| **Unit number and title** | | **Unit 7: Mobile Apps Development** |
| **Learning aim(s)** (For NQF only) | | **B:** Design a mobile app that utilises device  Functions  **C:** Develop a mobile app that utilises device  functions |
| **Assignment title** | | Design and develop a mobile app |
| **Assessor** | |  |
| **Issue date** | |  |
| **Hand in deadline** | |  |
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| **Vocational Scenario or Context** | | You work as a junior programmer for an educational charity which supports young children in developing Maths skills. You have been asked to develop a mobile app which will help children improve their mental arithmetic.  The app should run a game where the user has to answer a series of simple random arithmetic questions (add, subtract, multiply and divide) using whole numbers between 1 and 12. Subtraction and division should not produce negative answers. Each game should have 10 questions and the app should keep track of the score. Three levels should be provided, level 0 has no time limit, level 1 has a 20 second time limit per question and level 2 has a 10 second time limit per question. The app should include suitable graphics and sounds (e.g. applause when a correct answer is entered) to make it more engaging for young children. |
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| **Task 1** | | Design, develop and evaluate the mobile app to meet the requirements outlined in the scenario. You need to:   * Create a comprehensive design for the mobile app which is suitable for multiple devices and considers alternative aspects of the design. The design should include user requirements, visual designs and technical documentation * Review your design with at least two other people in order to help you refine and improve it * Write a justification of the design decisions you have made showing how they have helped ensure the app will meet the requirements identified in the scenario * Create the app, based on your design * Test the app using a number of different methods including the test plans you created during the design and feedback from users. You should document your tests showing that important problems and errors have been identified and addressed * Gather and analyse feedback on your completed app from other people and use it to optimise your app and produce an updated version * Write an evaluation of the design, development, maintenance and optimisation of your app, considering the completed app’s effectiveness in comparison to alterative solutions, the reasons why your solution was chosen and the extent to which it meets the requirements in the scenario. Your evaluation needs to be supported by evidence form all stages of the project and it needs to reach conclusions and suggest future developments   Present evidence that you have shown individual responsibility, effective time-management in your design and development of a mobile app, making high-quality justified recommendations and decisions. For example, you need to show how you have:  • Planned and managed your time and met targets.  • Reviewed and responded to outcomes including the use of feedback from others  • Behaved appropriately while completing the assignment – including professionalism, etiquette, supportive of others, timely and appropriate leadership, accountability and individual responsibility  • Evaluated outcomes to help inform high-quality justified recommendations and decisions   * Used appropriate methods of communication effectively |
| **Checklist of evidence required** | | * Design documentation * Feedback on the design collected from others * Improved version of the design * Written justification of design decisions * Completed app, including code listing and screen shots of the app working * Test documentation and user feedback * Analysis of feedback and evidence of optimisation of the app to produce and updated version * Evaluation of the design, development and optimisation process. * Evidence that you have shown individual responsibility, effective time-management and made high-quality justified recommendations and decisions |
| **Criteria covered by this task:** | | |
| Unit/Criteria reference | To achieve the criteria you must show that you are able to: | |
| 7/BC.D2 | Evaluate the design and optimised mobile app against client requirements. | |
| 7/BC.D3 | Demonstrate individual responsibility, creativity and effective self-management in the design, development and review of a mobile  app. | |
| 7/B.M2 | Justify how decisions made during the design process ensure the design  for the app will meet identified requirements. | |
| 7/C.M3 | Optimise a mobile app that meets the design criteria. | |
| 7/B.P3 | Produce designs for a mobile app to meet identified requirements | |
| 7/B.P4 | Review the mobile app designs with others to identify and inform  refinements. | |
| 7/C.P5 | Produce a mobile app that meets the design criteria. | |
| 7/C.P6 | Test a mobile app for functionality, usability, stability and performance | |
| 7/C.P7 | Review the extent to which the mobile app meets the identified requirements | |
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| **Sources of information to support you with this Assignment** | | Griffiths, D and Griffiths, D. Head First Android Development, 2015, O’Reilly Media, 978-1449362188  Ray, J. iOS 9 Development in 24 hours, 2016, Sams, 978-0672337673  http://developer.android.com/training/index.html Official Android development web site  <http://appinventor.mit.edu/explore/> MIT app inventor, simple android app creator |
| **Other assessment materials attached to this Assignment Brief** | | *eg, work sheets, risk assessments, case study* |