# **T:\Common\logo pack 2016\logo with title\KillarneyHeightsHS_Logo-RGB.jpgYear 11**

# **Software Design and Development**

**Assessment 1 Notification**

**Task Title:** Software Project 1

**Assessment Weighting: 20%**

**Details of Submission**: Friday 3rd April, 3.10pm

**Outcomes Assessed:**

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| P1.2 | describes and uses appropriate data types. |
| P3.1 | analyses a given problem in order to generate a computer based solution. |
| P5.2 | uses and develops documentation to communicate software solutions to others |
| P6.3 | designs and constructs software solutions with appropriate interfaces. |

**Assessment Information**

Please read through the task description carefully. The marks for each section are clearly shown.

All documentation will need to be word processed and contained in an A4 folder. Font should be Calibri, 12 point, headings excluded.

Included with your documentation will be a title page with your name, teachers name and the name of the project.

A contents page clearly showing each section of the task is also to be included. Every other page will contain a header and footer with your name and the name of the project. It is suggested that students keep a backup copy of their work.

No appeals will be heard if material is damaged or lost and no backup copy has been kept.

The theory component of the task must be printed and handed to the teacher on the due date.

The practical component of your project is to be contained inside a folder with the following naming convention

“YourName11SDDGameShow”

**Task Description**

A local charity organisation is running a fundraising event based on the TV show “Deal or No Deal”. Contestants pay a set fee to have the chance of being either a contestant or a podium player. Your software company has been asked to develop a program that will allow players to participate in a virtual version of the game.

**RULES OF THE GAME**

The Contestant selects one briefcase from 26. The 25 remaining briefcases are given to the 25 Podium Players, who take turns in opening their numbered cases, in the order decided by the Contestant. 25 of the cases contain an insert that represents a cash value.

As each case is opened, its contents are revealed to the audience, and the Contestant. The cash values contained in the opened cases are no longer available to be won. Whatever is represented inside the Contestants briefcase at the end of the game is what the Contestant will win, unless they accept an Offer from the Bank during the course of the Game.

**THE BANK**

During the game the contestant is made various offers by the Bank to sell their (the Contestants) briefcase for a cash sum. If the Contestant accepts a Bank Offer, they win the cash sum offered by the Bank, and are no longer entitled to the sum that is eventually revealed to be in the Contestants briefcase.

**OPENING THE BRIEFCASES**

The 26 briefcases are opened according to the following system:

6 cases are opened. The Bank makes an offer based on the remaining 20 closed cases. The Contestant decides whether to accept or reject the offer - Deal or No Deal.

5 cases are opened. The Bank makes an offer based on the remaining 15 closed cases. The Contestant decides Deal or No Deal.

4 cases are opened. The Bank makes an offer based on the remaining 11 closed cases. The Contestant decides Deal or No Deal.

3 cases are opened. The Bank makes an offer based on the remaining 8 closed cases. The Contestant decides Deal or No Deal.

2 cases are opened. The Bank makes an offer based on the remaining 6 closed cases. The Contestant decides Deal or No Deal.

The remaining unopened briefcases are then opened one at a time. In this portion of the Game, one Bank Offer is made to the Contestant after each individual case is opened. If the Contestant opens their selected case before the programs Host or the Producer directs them to do so, the Game will halt immediately, the Contestant will be eliminated and the Game will be declared null and void. The Contestant will not be eligible to take part in any further Games.

**HOW THE BANK MAKES IT OFFER**

All the remaining case totals are added together and then averaged. This amount is then reduced by 15%

**Case Totals**

|  |  |
| --- | --- |
| **.50c** | **$1000** |
| **$1** | **$2000** |
| **$2** | **$3000** |
| **$5** | **$4000** |
| **$10** | **$5000** |
| **$20** | **$10,000** |
| **$50** | **$15,000** |
| **$100** | **$20,000** |
| **$150** | **$30,000** |
| **$200** | **$50,000** |
| **$250** | **$75,000** |
| **$500** | **$100,000** |
| **$750** | **$200,000** |

**Marking Guidelines:**

**Theory Component and Marking Scale**

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| --- |
| **Students are required to** |
| Define the problem in your own words. |

**Stage 2: Planning the solution**

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| **Students are required to** |
| Identify each logical module within your project and identify an appropriate control structure/s for each module |
| Create an IPO chart |
| Create a data dictionary |
| Write an algorithm solution for the first case selection (six cases) and the Banks first offer. (pseudocode) |
| Draw a storyboard of planned screen design |

**Stage 3: Building the solution**

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| **Students are required to** |
| Create a working version of the coded program |
| Add comments which explain the purpose of each section of code. Use meaningful variable names to identify various data structures. |

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| --- | --- |
|  | |
| * uses appropriate development methodologies and project management techniques to analyse a problem and design a complete software solution * develops well-constructed algorithms for a variety of unfamiliar problems using appropriate control structures and data structures * effectively uses appropriate resources, tools and documentation to manage the development and to communicate the essential features of software solutions | **32 - 40** |
| * demonstrates an understanding of the phases of the software development cycle in producing a solution recognising client needs and concerns * uses development methodologies and project management techniques to analyse a problem and design a relevant software solution * develops algorithms for a variety of problems using appropriate control structures and data structures * uses a variety of resources, tools and documentation to manage the development and to communicate the essential features of software solutions | **25-31** |
| * outlines the phases of the software development cycle required to produce a solution to a specified problem * uses development methodologies and project management techniques to design a software solution * develops an algorithm for a specified problem showing some understanding of control structures and data structures * uses a limited number of resources, tools and documentation to develop and communicate some features of software solution | **15-24** |
| * demonstrates a basic understanding of the phases of the software development cycle * designs a partial software solution recognising the need for project management techniques * reads, interprets and modifies simple algorithms that use a variety of data structures * recognises and describes some resources, tools and documentation used to develop and communicate software solutions | **0-14** |
| **TOTAL** | **/40** |

**Feedback:**

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