Please fill this in with your expected mark and what you did to achieve the mark.  
Please both upload to moodle and provide to the marker at the demo.

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C++ Programming, Coursework part 1 mark sheet

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| Mark | Requirement | What you did (short explanation) |
| 1 | **1) Create an appropriate sub-class of BaseEngine with an appropriate background which is different from the demos** | Break the height of the screen in to 10 slides, use switch case to set 10 colours and create a gradient colour background. |
| 1 | **2) Show your ability to use the drawing functions** | When mouse left button down, use function drawBackGroundThickline() to draw an line between last mouse clicked and this time mouse clecked.  When some of the key on keyboard is pressed, use function drawBackgroundRectangle() to draw a little rectangle.  When draw the background, load and render the image with mask. |
| 1 | **3) Draw some text on the background (MUST be drawn to background surface!)** | Have drawn some background text shown as “Background Text” in each line of the background.  When moving object is over them it will not be seen unless the objects leaving. |
| 1 | **4) Have some changing text, refreshing/redrawing appropriately which is drawn to the foreground (not background), in front of moving objects** | A changing text show the collision counter of the biggest auto move object, increase when the object is collision with the board or with other objects. |
| 1 | **5) Provide a user controlled moving object which is a sub-class of DisplayableObject and different to the demos** | A user controlled moving object, looks look a caterpillar. Press up down left right arrow can change the head direction of it. Press ‘a’ can change the move method between auto and current mouse position. |
| 1 | **6) Ensure that both keyboard and mouse input are handled in some way and do something** | When left key down, use function drawBackGroundThickline() to draw a line between last mouse clicked and this time mouse clecked. When right mouse down, render the image with mask.  When ‘space’ is pressed, change the colour of following drawn line of white and draw a rectangle. When ‘a’ is pressed change following drawn colour to red and draw a rectangle. When ‘g’ is pressed change next drawn colour to green and draw a rectangle. When ‘b’ is pressed change next drawn colour to blue and draw a rectangle. When other key is pressed, change next drawn colour to original orange and draw a rectangle. When ESCAPE is pressed, clean the screen |
| 1 | **7) Provide an automated moving object which is a sub-class of DisplayableObject and different from the one in requirement 5** | Three automated moving objects can change between triangle and oval. |
| 1 | **8) Include collision detection for at least 2 moving objects, so that they interact with each other** | The user control object have collision detection with the other auto move objects, when collision occurs, the user control object can change the colour. |
| 1 | **9) Create your own subclass of TileManager** | Have a 6 rows \* 9 lines of tiles with each tile is triangle and have size 13\*13 and have gradient colour. |
| 1 | **10) Have at least one moving object interact correctly with the tile manager, changing a tile** | All the auto move object over the tiles, tile can change the colour. |
|  | Your program crashes on exit or has a clear memory leak. (Lose 1 mark.) | |
|  | Your program crashes at least once during its operation. (Lose 2 marks.) | |
|  | Your program crashes multiple times. (Lose 3 marks.) | |
|  | Your program crashes frequently. (Lose 4 marks.) | |
|  | Your program has some odd/unexpected behaviour/errors. (Lose 1 mark.) | |
|  | Your program has a lot of unexpected behaviour/errors. (Lose 2 marks.) | |