University of Abertay Dundee



BSc (Hons) Ethical Hacking

CMP104 – Programming with C++

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Fruit Machine Assignment  
Unit 2 Assessment

# **Brief Description**

**The slot machine game has the following features**:

* Four rotors and 7 rows each;
* Title above the slots;
* String below the slots indicating what the user should do:
  + Changes after the game is initialised for the first time;
* Variables indicating (statistics) current coins (starts with 100), spent coins, won coins and profit/loss in white, red, green, yellow colour respectively;
* Diagonal jackpot which gives 100 coins:
  + Text indicating the diagonal jackpot with randomised colour;
* Regular jackpot on middle row which gives 50 coins:
  + Slot machine changes colour to golden and string indicating jackpot appears bellow the slot machine and updates statistics;
* Checks if three (in no order) symbols match and gives 20 coins:
  + Turns array green and updates statistics;
* Check if two by two neighbour symbols match and gives 15 coins:
  + Turns array green and updates statistics;
* Check if two neighbour symbols match and gives 10 coins:
  + Turns array green and updates statistics;
* If no symbols match:
  + Array turns red and updates statistics;
* If user runs out of coins:
  + String appears indicating loss and console closes after 5 seconds;
* If user presses Q/q:
  + String appears indicating the user has quit the game and console closes after 5 seconds;
* Ability to change speed for:
  + All rotors;
  + One by one gradually from slow to fast:
    - Achieved with Sleep(); function inside for loop which is used to “spin” the slots;
* Combo streak counter indicating how many wins the user has in a row;
* Indicators showing the user the checked row;

# **Files**

The game consists of two .cpp files and a header file. The reason behind the creation of the other .cpp and the header file is to make the graphics code in the main .cpp clearer. Fruit\_Machine.cpp consists of the main game loop, macros for easier slot machine expansion, global variables used to update the statistics of the game (total coins, spent, won, etc.), functions for updating/overwriting the statistics and multiple if statements to check how many symbols match and their patterns. Graphics.h has two macros for the console’s size and a class named Graphics which consists of the functions in Graphics.cpp (public members) and two private members which were taken from the LaMothe code. Graphics.cpp has a constructor used to initialise the public members of the class in Fruit\_Machine.cpp, functions taken from the LaMothe code, function used to hide the cursor (taken from stackoverflow.com) and some functions created by me (indicators showing which row is checked, etc.).