IT314: Software Engineering
Lab Session – Specification-based Test Case Generation

Prerequisites: before the session you should review the lecture slides on use case testing and test design strategies such as equivalence partitioning and boundary value analysis.
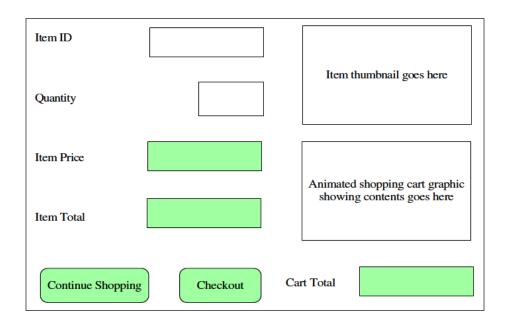
Section A

Functional testing of the Requirement Specification:

1. Consider a program for determining the previous date. Its input is triple of day, month and year with the following ranges 1 <= month <= 12, 1 <= day <= 31, 1900 <= year <= 2015.The possible output dates would be previous date or invalid date. Design the equivalence class test cases?

Write a set of test cases (i.e., test suite) – specific set of data – to properly test the programs. Your test suite should include both correct and incorrect inputs.

1. Enlist which set of test cases have been identified using Equivalence Partitioning and Boundary Value Analysis separately.
2. Modify your programs such that it runs on `eclipse IDE`, and then execute your test suites on the program. While executing your input data in a program, check whether the identified expected outcome (mentioned by you) is correct or not.

2. You are testing an e-commerce system that sells products like caps and jackets. The problem is to create functional tests using boundary-value analysis and equivalence class partitioning techniques for the webpage that accepts the orders. A screen prototype for the order-entry web page is shown below.

The system accepts a five-digit numeric item ID number from 00000 to 99999. The system accepts a quantity to be ordered, from 1 to 99. If the user enters a previously ordered item ID and a 0 quantity to be ordered, that item is removed from the shopping cart. Based on these inputs, the system retrieves the item price, calculates the item total (quantity times item price), and adds the item total to the cart total. Due to limits on credit card orders that can be processed, the maximum cart total is $999.99