

# Requirements

1. Object oriented elements that you write code for:
  - a. Classes
    - i. Switchable
    - ii. MainMenu
    - iii. MenuFail
    - iv. Guassian
    - v. CallModel
    - vi. PutModel
    - vii. BlackScholesInfo
    - viii. BlackScholesCalculator
  - b. Subclasses
    - i. BlackScholesCalculator extends Switchable
    - ii. MainMenu extends Switchable
    - iii. CallModel extends Guassian
    - iv. PutModel extends Guassian
  - c. Abstract Class
    - i. Switchable
  - d. Interface
    - i. CommonEquations is implemented by CallModel and PutModel
2. Code elements that you utilize
  - a. HashMap utilized in Switchable
    - i. Line 22
  - b. Exception Handling
    - i. BlackScholesCalculator.CalculatorPutPrice()
      1. NumberFormatException
        - a. Line 465
      2. NullPointerException
        - a. Line 472
    - ii. BlackScholesCalculator.CalculateCallPrice()
      1. NumberFormatException
        - a. Line 495
      2. NullPointerException
        - a. Line 502
    - iii. BlackScholesCalculator.readFile()

1. FileNotFoundException
      - a. Line 519
    2. IOException
      - a. Line 521, 526
  - iv. Switchable.add()
    1. IOException
      - a. Line 53
    2. Exception
      - a. Line 56
3. Clearly Defined Model
  - a. CallModel
    - i. Private variables
      1. lines 20-29
    - ii. Public get/set functions and constructor
      1. lines 34-132
  - b. PutModel
    - i. Private variables
      1. Lines 20-29
    - ii. Public get/set functions and constructor
      1. Lines 31-130
4. Scene Switching
  - a. Switchable facilitates scene switching with switchTo() method
    - i. Line 64
  - b. MainMenu.handleGoToB switches scenes to BlackScholesCalculator
    - i. Line 39
  - c. BlackScholesCalculator allows for switching to MainMenu and BlackScholesInfo
    - i. BlackScholesCalculator.handleGoToA changes scene to MainMenu
      1. Line 390
    - ii. BlackScholesCalculator.handleGoToC changes scene to BlackScholesInfo
      1. Line 397
  - d. BlackScholesInfo allows for switching scenes to MainMenu and BlackScholesCalculator
    - i. BlackScholesInfo.handleGoToA changes scene to MainMenu
      1. Line 55
    - ii. BlackScholesInfo.handleGoToC changes scene to BlackScholesCalculator
      1. Line 61
5. Access "About" information
  - a. MainMenu.aboutMenu shows a popup of information about the project

- i. Line 59
  - b. BlackScholesCalculator.aboutMenu shows a popup of information about the project
    - i. Line 96
  - c. BlackScholesInfo.abouMenu shows a popup of information about the project
    - i. Line 40
- 6. Save and Load Data
  - a. BlackScholesCalculator facilitates saving and loading of application
    - i. Saving
      - 1. BlackScholesCalculator.handleSave()
        - a. Line 432
      - 2. BlackScholesCalculator.saveFile()
        - a. Line 533
    - ii. Loading
      - 1. BlackScholesCalculator.handleLoad()
        - a. Line 414
      - 2. BlackScholesCalculator.readFile()
        - a. Line 509