# **COMP123 – Programming**

# Assignment 7

Movie Bonanza – Online Streaming.

Due Week #14 (August 19, 2016) @midnight.

Value 13%

Move Bonanza – Online Streaming.

Maximum Mark: 76

**Overview**: Create a multi-form project that allows the user to select a **Movie** to view from an online video streaming service called "Movie Bonanza". The user will select a Movie from a **Drop Down List**. The selected Movie will display its category and the cost to stream the movie in separate labels. The application will then calculate the cost of the Movie (including taxes) in a separate form. The cost will vary according to the category of the movie as shown below. The user will be given the option to buy the movie and have a DVD copy sent to him for an additional charge of \$10.00 (including shipping).

| Movie               | Category    |  |
|---------------------|-------------|--|
| Season of the Witch | Sci-Fi      |  |
| The Green Hornet    | Action      |  |
| The Dilemma         | Comedy      |  |
| Death Race 2        | Action      |  |
| Company Men         | Drama       |  |
| No Strings Attached | Comedy      |  |
| The Way Back        | Drama       |  |
| The Mechanic        | Action      |  |
| The Rite            | Horror      |  |
| Sanctum             | Action      |  |
| The Other Woman     | Action      |  |
| The Roommate        | Thriller    |  |
| Waiting for Forever | Drama       |  |
| Cedar Rapids        | Comedy      |  |
| Gnomeo and Juliet   | Family      |  |
| Just Go With It     | Comedy      |  |
| The Eagle           | Action      |  |
| I am Number Four    | Sci-Fi      |  |
| Footloose           | New Release |  |
| Real Steel          | New Release |  |

| Category     | <b>Download Cost</b> |
|--------------|----------------------|
| Comedy       | \$1.99               |
| Drama        | \$1.99               |
| Action       | \$2.99               |
| Sci-Fi       | \$2.99               |
| Horror       | \$2.99               |
| Thriller     | \$1.99               |
| Family       | \$0.99               |
| New Releases | \$4.99               |

| <u>F</u> ile    | <u>H</u> elp  |
|-----------------|---------------|
| <u>P</u> rint   | <u>A</u> bout |
| Strea <u>m</u>  |               |
| Canc <u>e</u> l |               |

# **Instructions:**

1. Your App should contain 3 forms: **SelectionForm** (where the user selects the movie), **OrderForm** (where the user is shown the cost of the movie) and **StreamForm** (where the user is notified that his credit card has been charged and the video streaming is about to begin)

# (20 Marks Functionality, 25 Marks GUI, 5 Marks: Internal Documentation)

- 2. SelectionForm: (SubTotal: 13 Marks: GUI, 9 Marks: Functionality)
  - a. Create a **Splash Screen** (SplashForm) for the project that includes a company logo for "Movie Bonanza". Ensure that the form is displayed for a minimum of 3 seconds. (2 Marks: GUI, 2 Marks: Functionality)
  - b. Add a **drop down list** (MovieDropDownList) that displays a list of movies available to stream as shown in the above chart. Set the **Sorted** property to True. Note: You are not required to connect your DropDownList to a data source for this App (see bonus section) (2 Marks: GUI)
  - c. Add a **Group Box** to the form. The text of the **Group Box** will be set to "**Your Selection**". (1 Mark: GUI).
  - d. The Movie's title, category and cost will display in 3 text boxes (along with appropriate labels) inside the Group Box. The textboxes will be set to "Read Only". (3 Marks: GUI, 1 Mark: Functionality)
  - e. Add a **Picture Box** to the **Group Box** which displays a **small graphic** of the movie that is selected (All graphics are provided with the assignment) (2 Marks: GUI, 2 Marks: Functionality).
  - f. Store the user's selection (including movie title, category and cost) in an **Array** or **List** structure (2 Marks: Functionality).
  - g. Add a "Next" button that takes the user to the OrderForm and hides SelectionForm. This option will be grayed-out (disabled) until the user has selected a movie from the drop down list (2 Marks: GUI, 2 Marks: Functionality)
  - h. Set the **ControlBox**, **MaximizeBox**, **MinimizeBox** and **Showlcon** properties of the form to False (1 Mark: GUI).

#### 3. OrderForm (SubTotal: 14 Marks: GUI, 16 Marks Functionality)

- a. Create a **Menu Strip** as shown above (1 Mark: GUI).
- b. Add an **Cancel button** to the form (1 Mark: GUI).
- c. The Cancel menu selection and the Cancel Button will close the Form using a shared event handler method. The Cancel event will close the OrderForm and return the user to the SelectionForm (2 Marks: Functionality).
- d. Add a "Stream" button to the form (1 Mark: GUI).
- e. The "Stream" menu selection and the "Stream" Button will make the StreamForm visible and hide the OrderForm using a shared event method (2 Marks: Functionality).
- f. The **Print Menu selection** will display a **MessageBox** that confirms that the user wishes to print his order. This will mock up the printing process but will not actually print anything. (1 Mark: Functionality)
- g. The **About Menu selection** will display an **AboutBox** containing the programmer's name, the version of the program and a website and contact number for the "Movie Bonanza" online movie streaming service (2 Marks: Functionality)
- h. Add **2 group boxes** (one on the left side of the form and one on the right side of the form). The group box on the left will be labeled "**Movie Selected**" and the group box on the right will be labeled "**Your Order**" (1 Mark: GUI).

- i. Add 2 text boxes and a Picture Box (that will display a larger graphic of the user's movie selection) to the group box on the left that will display the user's selections from SelectionForm including the Movie's Title and the Movie's Category. The text boxes will be set to "Read Only" (2 Marks GUI: 2 Marks Functionality).
- j. Add **4 text boxes** (and appropriate labels) to the group box on the right that will display the **Movie's cost**, a **SubTotal**, the **Sales Tax** (at 13%), and a **Grand Total**. The text boxes will be set to **"Read Only"**. (4 Marks: GUI, 2 Marks: Functionality).
- k. Add a **hidden label** and a **hidden textbox** to the group box on the right, positioned appropriately above the **SubTotal**. The text box will be used to display an additional charge of \$10.00 if the user decides to buy the movie and have the DVD sent to him (1 Mark GUI, 1 Mark: Functionality).
- I. Add a **Checkbox** and to the group box on the right that will indicate the user has chosen to the buy the movie. When the checkbox is selected, the hidden label and hidden textbox will become visible on the form. Make sure to adjust the **SubTotal**, **Sales Tax** and the **Grand Total** text boxes (1 Mark: GUI, 2 Marks: Functionality).
- m. Add a "Back" button to the form that takes the user back to the SelectionForm and hides the OrderForm. When the user is taken back to the SelectionForm his previous selection is displayed. (1 Mark: GUI, 2 Marks: Functionality)
- n. Set the **ControlBox**, **MaximizeBox**, **MinimizeBox** and **Showlcon** properties of the form to False (1 Mark: GUI).

#### 4. StreamForm (SubTotal: 6 Marks: GUI, 3 Marks: Functionality)

- a. Add an "OK" button to the form. When the OK button is clicked the form will close and the application will terminate (1 Mark: GUI, 1 Mark: Functionality).
- b. Add a label that will thank the user for using "Movie Bonanza" (1 Mark: GUI).
- c. Add a **label** that will notify the user that his credit card has been billed for the **Grand Total** as indicated in **OrderForm** (1 Mark: GUI, 1 Mark: Functionality).
- d. Add a **label** that notifies the user that the Movie he has selected (from **SelectionForm**) will begin streaming in about a minute (1 Mark: GUI, 1 Mark: Functionality).
- e. Set the **StartPosition** property of the form to **CenterScreen** (1 Mark: GUI).
- f. Set the **ControlBox**, **MaximizeBox**, **MinimizeBox** and **Showlcon** properties of the form to False (1 Mark: GUI).

#### 5. Solution Structure (6 Marks: Program Structure):

- a. Your solutions should include four Windows Forms **SplashForm.cs**, **SelectionForm.cs**, **OrderForm.cs**, **StreamForm.cs** (4 Marks: Program Structure).
- All Windows Forms and all attached UI Controls must have appropriate Variable names with the following format: ControlNameUIControlType (e.g. CalculateBMIButton) (1 Mark: Program Structure).
- c. Ensure all *private* class member variables (instance variables) use an underscore character (\_) at the beginning of the identifier name to signify that they are private (or protected) (1 Mark: Program Structure).

## Include Internal Documentation for your Application (5 Marks: Internal Documentation):

Ensure you include a comment header for your C# files that indicate: The App name,
 Author's name, Student Number, App Creation Date, App description (2 Marks: Internal Documentation).

- b. Ensure you include a **section header** for all of your **Event Handlers, Classes,** and any **functions** (1 Marks: Internal Documentation)
- c. Ensure all your code uses **contextual variable names** that help make the files human-readable (1 Marks: Internal Documentation).
- d. Ensure you include **inline comments** that describe your GUI Design and Functionality. (1 Marks: Internal Documentation).
- 7. Share your files on **GitHub** to demonstrate Version Control Best Practices **(4 Marks: Version Control)**.
  - Your repository must include your code and be well structured (2 Marks: Version Control).

Your repository must include **commits** that demonstrate the project being updated at different stages of development – each time a major change is implemented (2 Marks: Version Control).

# Optional App Features (i.e. Potential Bonus Marks).

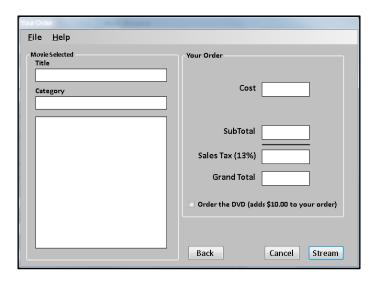
- A. Create a SQL Database with two Tables: Movies and Categories. Add the Movie Data to the appropriate tables in the database. Connect the **DropDownList** to the SQL Database (8 Bonus Marks).
- B. Have the **Print** selection of the Menu create a **Print Preview** of the **OrderForm** (4 Bonus Marks).

# **FINAL FORM (SAMPLES)**

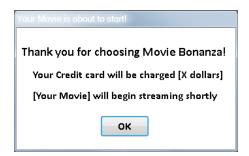
## 1. SelectionForm

| Current Movies   |                  |                 |      |
|--|------------------|-----------------|------|
| Cedar Rapids Company Men Death Race 2 Footloose Gnomeo and Juliet I am Number Four Just Go With It No Strings Attached Real Steel Sanctum Season of the Witch The Dilemma The Eagle The Green Hornet | 4 Your Selection | Title  Category | Cost |

## 2. OrderForm



# 3. StreamForm



## **SUBMITTING YOUR WORK**

Your submission should include:

- 1. A zip archive of your project files
- 2. A link to your project files on GitHub.

# **EVALUATION**

| Feature                | Description  | Marks |
|------------------------|--|-------|
|                        |  |       |
| GUI / Interface Design | UI Controls meet the application requirements. Display elements are deployed in an attractive manner. Appropriate contrast is applied to application UI Controls and any background colours applied so that all text is legible.   | 33    |
| Functionality          | The program's deliverables are all met and the program functions as it should. No errors appear as a result of execution. User Input does not crash the program.   | 28    |
| Program Structure      | Your main "driver" class is named Program and it creates objects that are defined in other classes. All other classes are contained in their own files. Your classes use <b>public</b> properties and related <b>private</b> member variables wherever possible.   | 6     |
| Internal Documentation | A program header is present and includes the name of the program, the name of the student, student number, date last modified, a short revision history and a short description of the program. All methods and classes include headers that describe their functionality and scope and follow commenting best practices. Inline comments are used to indicate code function where appropriate. Variable names are contextual wherever possible. | 5     |
| Version Control        | GitHub commit history demonstrating regular updates.   | 4     |
| Total                  |  | 76    |

This assignment is weighted 13% of your total mark for this course.

All Assignments are due at the beginning of class.

Late submissions:

• 20% deducted for each additional day.

External code (e.g. from the internet or other sources) can be used for student submissions within the following parameters:

- 1. The code source (i.e. where you got the code and who wrote it) must be cited in your internal documentation.
- 2. It encompasses a maximum of 25% of your code (any more will be considered cheating).
- 3. You must understand any code you use and include documentation (comments) around the code that explains its function.
- 4. You must get written approval from me via email.