CSCI-101 Programming 1

Lab 16a

INSTRUCTIONS

Create a directory named **lab16** in your labs directory. Inside your **Lab16** directory add a class named **Cell** that models a cell of a 2D game board and contains the following.

I. A field named **isHidden** that holds a boolean value and is initialized to **false**.

II. A field named **code** that holds an integer and is initialized to 2.

III. A field named **glyph** that holds a character and is initialized to '\u2588'.

IV. A constructor that has no parameters and simply returns.

V. A constructor that has a single integer parameter named **c** and does the following:

   a. The **code** field is set to **c**.
   b. The **glyph** field is set, using a switch statement, according to the following table of Unicode block elements, and symbols based on the value in **c**.

code	glyph	
1	'\u2007'	
2	'\u2588'	■
3	'\u2620'	☠
4	'\u2654'	♔

VI. Getters for each field. Recall that getters are method that have no parameters and simply return the value of the respective field.

VII. A setter for the **isHidden** field. Recall that setters have a single parameter that is the same type as the respective field and sets the field equal to the value passed into the method.

VIII. A method named **setGlyph** that has a single integer parameter named **newCode** and if the value in **newCode** is between 1 and 4 (inclusively) the method sets the code field equal to **newCode** and sets the **glyph** field equal to the corresponding character in the table above. If the value in **newCode** is not between 1 and 4 then the method simply returns.

IX. A method named **toggleIsHidden** that sets **isHidden** to **true** if it currently is **false** and sets it to **false** if it is currently **true**.

X. Override the toString method to return a string containing the value in the **glyph** field.