

Java Foundations Practices - Section 2

Problem 1: Simple ASCII Art

Use 8 print statements to recreate the smiley face above. Your art will rely on only a single character, besides space, such as X or #.

CODE:

```
import java.io.*;

public class SimpleArt {

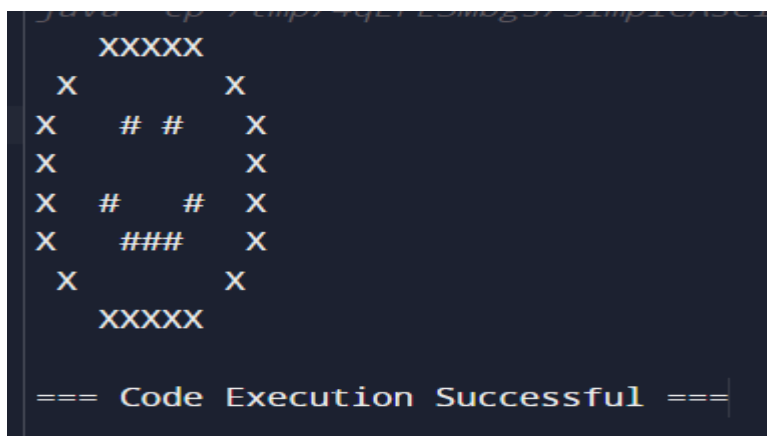
    public static void main(String[] args) {

        System.out.println("  XXXXX ");
        System.out.println(" X      X");
        System.out.println("X  ##  X");
        System.out.println("X      X");
        System.out.println("X  #    # X");
        System.out.println("X  ###  X");
        System.out.println(" X      X");
        System.out.println("  XXXXX ");

    }

}
```

OUTPUT:



Problem 2: Original ASCII Art

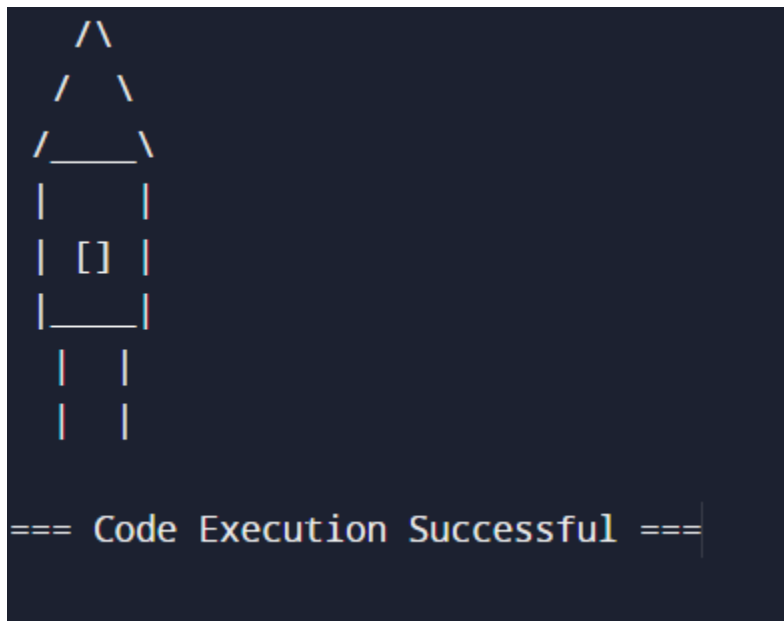
Use print statements to create your own beautiful original ASCII art. Use comments to describe what your image is depicting. It's ok for your art to rely on only a single character, besides space, such as X or #. But you're encouraged to use a few different characters in your design, like in the cat example from class. Your art must also:

- Use at least 8 print statements
- Be at least 8 characters wide
- Use at least 20 characters that aren't space

CODE:

```
public class HouseAsciiArt {  
    public static void main(String[] args) {  
        // This ASCII art depicts a house  
        System.out.println("  /\ ");  
        System.out.println(" /  \ ");  
        System.out.println("/____\ ");  
        System.out.println(" |  | ");  
        System.out.println(" | [] | ");  
        System.out.println(" |____| ");  
        System.out.println(" |  | ");  
        System.out.println(" |  | ");  
    }  
}
```

OUTPUT:



Problem 3: The Snake Box Factory

Scenario: Develop software for a company that delivers custom-sized cardboard boxes filled with custom-ordered snakes.

Task: Identify 3 objects from the scenario and list 3 properties and 3 behaviors for each object.

OBJECT 1: BOX

- **Properties:**
 1. Size (e.g., small, medium, large)
 2. Material (e.g., cardboard, plastic)
 3. Color (e.g., brown, white)
- **Behaviors:**
 1. Open
 2. Close
 3. Hold items

OBJECT 2 : SNAKE

- **Properties:**
 1. Species (e.g., python, cobra)
 2. Length (e.g., 1 meter, 2 meters)
 3. Color (e.g., green, brown)
- **Behaviors:**
 1. Slither
 2. Hiss
 3. Shed skin

OBJECT 3:ORDER

- **Properties:**
 1. Order ID
 2. Customer name
 3. Order date
- **Behaviors:**
 1. Process order
 2. Ship order
 3. Track order

DOCUMENT:

Objects in the Snake Box Factory Scenario

1. Box

- Properties:

1. Size: The dimensions of the box (e.g., small, medium, large).
2. Material: The type of material the box is made from (e.g., cardboard, plastic).

3. Color: The color of the box (e.g., brown, white).

- Behaviors:

1. Open: The action of opening the box.

2. Close: The action of closing the box.

3. Hold items: The ability of the box to contain items within it.

2. Snake

- Properties:

1. Species: The type of snake (e.g., python, cobra).

2. Length: The measurement of the snake's length (e.g., 1 meter, 2 meters).

3. Color: The color of the snake (e.g., green, brown).

- Behaviors:

1. Slither: The movement of the snake.

2. Hiss: The sound produced by the snake.

3. Shed skin: The process by which the snake sheds its old skin.

3. Order

- Properties:

1. Order ID: A unique identifier for each order.

2. Customer name: The name of the customer placing the order.

3. Order date: The date when the order was placed.

- Behaviors:

1. Process order: The steps involved in preparing the order for shipment.

2. Ship order: The action of sending the order to the customer.
3. Track order: The ability to monitor the status and location of the order.