Vincent nguyen

I first determined the order of how I was going to do the beach. I saw the background then determined from there:
Name on screen, ocean, shadows under rocks, rock, and finally house

Code for Graphics Challenge N-S last name

```java
import java.awt.Font;
import java.util.Random;

/**
 * Description
 *
 * Program 1
 * draws a beach house with last name N-S using graphics
 *
 * Program 2
 * A dice game that iterates 10 times and determins a winner,
 * drew some sick graphics
 *
 * @author: Vincent Nguyen
 * @version: 10/6/24
 */
public class beachhouseVincentNguyen
{
    public static void main(String[] args)
    {
    }

    public static void  beachhouseVincentNguyen()
    {
        // Set up graphics
        Draw scr = new Draw();
        scr.setXscale(0,400);
        scr.setYscale(400,0);
        scr.setTitle("Beach House by Vincent Nguyen");

        // Sky or background
        scr.setPenColor(176,220,229); // Light blue
        scr.filledRectangle(200,200,200,200);

        // Name on Screen
        scr.setPenColor(Draw.BLACK);
        Font nameFnt = new Font("Consolas", Font.PLAIN, 25);
        scr.setFont(nameFnt);
        scr.text (200,80, "Beach House by Vincent Nguyen", -25);

```

```
        // ocean
        scr.setPenColor(3,135,137); // teal
        scr.filledRectangle(200,280,200,120);

        // shadows around rocks
        // ellipse under dark blue rock
        scr.setPenColor(169,215,231); // light blue
        scr.filledEllipse(200,220,190,20);

        // ellipse under cobalt blue rock
        scr.setPenColor(64,165,173);
        scr.filledEllipse(280,260,100,15);

        // ellipse under bright blue polygon
        scr.setPenColor(136,200,210);
        scr.filledEllipse(120,340,180,40);

        // rocks
        scr.setPenColor(25,25,111); // dark blue rock
        double x[] ={0,200,340,0};
        double y[] ={20,100,220,220};
        scr.filledPolygon(x,y);

        scr.setPenColor(66,105,224); // cobalt blue rock
        double x1[] ={140,240,360,340};
        double y1[] ={260,180,220,260};
        scr.filledPolygon(x1,y1);

        scr.setPenColor(1,190,255); // bright blue rock
        double x2[] = {0,140,280,0};
        double y2[] = {220,200,340,340};
        scr.filledPolygon(x2,y2);

        // House
        scr.setPenColor(252,125,108); // pinkish Roof
        double x3[] = {80,140,160,100};
        double y3[] = {100,100,120,120};
        scr.filledPolygon(x3,y3);

        // Walls
        scr.setPenColor(164,165,167); // Grayish left wall
        double x4[] = {80,100,100,80};
        double y4[] = {100,120,140,140};
        scr.filledPolygon(x4,y4);

        scr.setPenColor(223,220,221); // whitish front wall
        double x5[] = {100,160,160,100};
        double y5[] = {120,120,160,160};
        scr.filledPolygon(x5,y5);

        // Ground on which the house is on
        scr.setPenColor(12,131,139); // teal mound
        double x6[] = {80,120,180,60};
        double y6[] = {140,140,160,160};
        scr.filledPolygon(x6,y6);
    }
```

I had the hardest time actually on the rock in the middle, but after some trial and error I got it.

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Graphics outout

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Program 2 is the dice game from problem challenge 21
I started with the graphics then went into my for loop and used an if statement to determine the results and graphics.

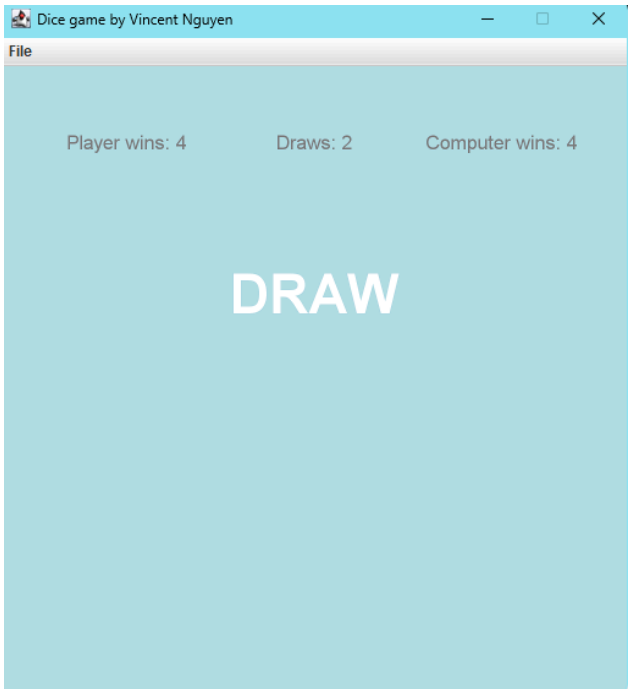
```
98      public static void dice_game()
99      {
100         // Set up Graphics
101         Draw scr = new Draw() ;
102         scr.setXscale(0,400);
103         scr.setYscale(400,0);
104         scr.setTitle("Dice game by Vincent Nguyen");
105         Random random = new Random();
106
107         System.out.print("User VS Computer");
108         int user = 0;
109         int computer = 0;
110         int userWins = 0;
111         int cpuWins = 0;
112         int draws = 0;
113
114         for(int i = 1; i <= 10; i++)
115         {
116             user = random.nextInt(6) + 1;
117             computer = random.nextInt(6) + 1;
118             if (user > computer)
119             {
120                 userWins += 1;
121             }
122             else if (user < computer)
123             {
124                 cpuWins += 1;
125             }
126             else
127             {
128                 draws += 1;
129             }
130         }
131
132         Font winnerName = new Font("Roboto", Font.BOLD, 45);
133
134         // Display Results of game
135         scr.setPenColor(176,220,229);
136         scr.filledRectangle(200,200,200,200);
```

```
137
138         scr.setPenColor(125, 125, 125);
139         scr.text(80,  50,  "Player wins: " + userWins);
140         scr.text(200, 50,  "Draws: " + draws);
141         scr.text(320, 50,  "Computer wins: " + cpuWins);
142
143         // Checks if the user won first
144         if  (userWins > cpuWins)
145         {
146             scr.setPenColor(Draw.WHITE);
147
148             // Display User winner
149             scr.text(200, 100, "WINNER");
150             scr.setFont(winnerName);
151             scr.text(200, 150, "PLAYER");
152
153             scr.setPenColor (240, 188, 133); // tan
154             scr.filledCircle(200, 250, 50);  // head
155             scr.filledSquare(200, 300, 10);  // neck
156
157             scr.setPenColor(0, 179, 87);
158             double x1[] = {190, 160, 160, 240, 240, 210};
159             double y1[] = {310, 360, 400, 400, 360, 310};
160             scr.filledPolygon(x1, y1);
161         }
162         // Checks if the user and cpu drawed
163         else if(userWins == cpuWins)
164         {
165             scr.setPenColor(Draw.WHITE);
166
167             // Display Draw
168             scr.setFont(winnerName);
169             scr.text(200, 150, "DRAW");
170
171         }
172         else // Computer had to win
173         {
174             scr.setPenColor(Draw.WHITE);
```

```
175
176             // Display Computer Winner
177             scr.text(200, 100, "WINNER");
178             scr.setFont(winnerName);
179             scr.text(200, 150, "COMPUTER");
180
181             scr.setPenColor(128, 128, 128); // monitor
182             scr.filledRectangle(150, 250, 80, 40); // monitor screen
183             scr.setPenColor(16, 21, 36);
184             scr.filledRectangle(150, 250, 75, 35); // inside screen
185
186             scr.setPenColor(128, 128, 128);
187             double x2[] = {230, 300, 140, 70}; // Keyboard
188             double y2[] = {290, 350, 350, 290};
189             scr.filledPolygon(x2, y2);
190
191
192         }
193     }
194 }
```

-

Graphics Output for player, used some of the polygons again to show who won



There was one issue that I found in my program that I did not consider during my logic. I originally had this screen as a win for player, but realized that this is not correct and there was a draw.

I changed the appropriate values and displayed the draw.