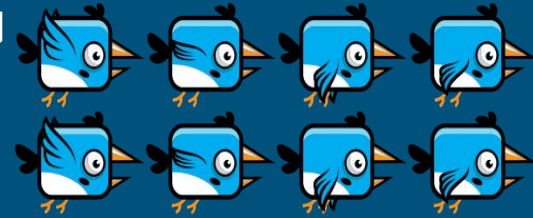


ADVANCE PROGRAMMING PRACTICE



REVIEW-2
TITLE: HAPPY BIRD



ABOUT



Happy Bird is a game developed using Java that has a single input . The main Game works with a continuous loop of pipes on the top and bottom and the bird(a constant entity) with only horizontal movement .The background and the pipes moves to give the illusion of movement. With each press the bird takes a leap of 15 virtual tiles while the pipe moves at a constant speed of 3 tiles per second. The pipe has a constant opening of 18 tiles and the size of the top pipe has the range of fullscreen , once the top wall is set,the lower wall is set 18 tiles away from the top wall. The game stops when the centre of the bird hits any of the values given to the pipes , ie if loop keeps checking if the position of the bird and the position of the wall is equal and stops the game when it is.



***WHAT WILL YOU
LEARN??***

- Building logic with the help of functions, loops, conditionals, and variables
 - Handling Classes and Object creations
 - Java Swing and Java AWT for creating a user-friendly GUI
-



FEATURES:



- i) Use the spacebar key to fly high.
- ii) Create obstacles and birds with the help of Java Swing.
- iii) Keep updating the current score and the high score as the bird passes by an obstacle.



CODE:

```
PImage backpic, birdpic, wallpic, welcomescreen;
int game, score, highscore, x, y, vertical, wallx[] = new int[2], wally[] = new int[2];

void setup() {
    size(600, 800);
    backpic = loadImage("https://raw.githubusercontent.com/Gaspared/FlappyBird/main/img/back.png");
    birdpic = loadImage("https://raw.githubusercontent.com/Gaspared/FlappyBird/main/img/bird.png");
    wallpic = loadImage("https://raw.githubusercontent.com/Gaspared/FlappyBird/main/img/wall.png");
    welcomescreen = loadImage("https://raw.githubusercontent.com/Gaspared/FlappyBird/main/img/start.png");
    game = 1;
    score = 0;
    highscore = 0;
    x = -200;
    vertical = 0;
    frameRate(30); // Set the frame rate to 30 frames per second for a slower animation
    fill(0, 0, 0);
    textSize(20);
}
```

CODE:

```
void draw() {
  if (game == 0) {
    imageMode(CORNER);
    image(backpic, x, 0);
    image(backpic, x + backpic.width, 0);
    x -= 3; // Adjust the scrolling speed for a slower game
    vertical += 1;
    y += vertical;
    if (x == -1800) x = 0;
    for (int i = 0; i < 2; i++) {
      imageMode(CENTER);
      image(wallpic, wallx[i], wally[i] - (wallpic.height / 2 + 100));
      image(wallpic, wallx[i], wally[i] + (wallpic.height / 2 + 100));
      if (wallx[i] < 0) {
        wally[i] = (int) random(200, height - 200);
        wallx[i] = width;
      }
      if (wallx[i] == width / 2) highscore = max(++score, highscore);
      if (y > height || y < 0 || (abs(width / 2 - wallx[i]) < 25 && abs(y - wally[i]) > 100)) game = 1;
      wallx[i] -= 3; // Adjust the wall movement speed for a slower game
    }
    image(birdpic, width / 2, y);
    text("Score: " + score, 10, 20);
  } else {
    imageMode(CENTER);
    image(welcomescreen, width / 2, height / 2);
    text("High Score: " + highscore, 50, 130);
  }
}
```

```
void mousePressed() {  
    vertical = -15;  
    if (game == 1) {  
        wallx[0] = 600;  
        wally[0] = y = height / 2;  
        wallx[1] = 900;  
        wally[1] = 600;  
        x = game = score = 0;  
    }  
}
```

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