GAME MECHANICS-2

COMPUTER NETWORKING

Time: 60 mins

Introduction

In this class, the student/s will create the game window and make the players take turns to roll the die.

New Commands Introduced

- No new commands introduced.

Vocabulary

- **Die/Dice** is a cube marked with dots or numbers usually used in a game of chance.

Learning Objectives

Student/s should be able to:

- ***Recall*** how to send and receive messages between client and server.
- ***Explain*** the use Unicode to display the die face.
- ***Demonstrate*** the creation of a game window and players taking turns to roll the die .

Activities

1. **Class Narrative:** *(3 mins)*
    - Brief the student/s that they would display the game window and add the functionality to roll a die.
2. **Concept Introduction Activity:** *(4 mins)*
    - Let the student/s undertake the explore-activity to observe the game window of the ludo ladder game.
    - Using the slides, explain that the student/s will learn:
        - to create the ludo board
        - to roll the die
        - to take turns to roll the die

3. **Activity 1: Create the Ludo Board** *(14 mins)*

   Teacher Activity: *(7 mins)*

- Recall the widget that is used to add the background using the quiz.
- Inform the student/s that the code to display the background and the text is already done.
- Explain how labels are used to create the boxes and how their positions is calculated.
- Demonstrate how to create the boxes on the left side of the board.
- Demonstrate how changing the values of the xpos, ypos and box_width changes the size and position of the boxes.

  Student Activity: *(7 mins)*

- Guide the student/s to create the boxes on the right side of the board and the finishing box.

4. **Activity 2: Roll the Die** *(12 mins)*

   Teacher Activity: *(6 mins)* .

- Introduce the student/s to the Unicode characters used to print the faces of the die.
- Demonstrate how to display the face of the die.

  Student Activity: *(6 mins)*

- Guide the student/s to store the unicode and display the face of the die on the game window.

5. **Activity 3: Take Turns to Roll the Die** *(12 mins)*

   Teacher Activity: *(6 mins)*

- Recall code to remove the widget.
- Demonstrate how to add the feature for players to take turns to roll the die.

  Student Activity: *(6 mins)*

- Guide the students to add the feature for players to take turns to roll the die.

6. **Introduce the Post class project:** *(2 min)*

- Create the game window of the tambola game..

7. **Test and Summarize the class learnings:** *(5 mins)*

- Check for understanding through quizzes and summarize learning after respective activities.
- Summarize the overall class learning towards the end of the class.

8. **Additional activities:**
    - Encourage the student/s to modify the board design.
    - Encourage the student/s to add another die to play the game.

9. **State the Next Class Objective:** *(1 min)*
    - In the next class, student/s will color the current box of the player.

U.S. Standards:

CSTA: 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-19

Links Table		
Activity	**Activity Name**	**Link**
Class Presentation	Game Mechanics-2	https://s3-whjr-curriculum-uploads.whjr.online/0306a24b-fed1-480b-a5bf-275819f19672.html
Explore Activity	Game Mechanics-2	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-SAS-BP
Teacher Activity 1	Create the Ludo Board	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-TAS-BP
Teacher Reference: Teacher Activity 1 Solution	Create the Ludo Board	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-TAS
Student Activity 1	Create the Ludo Board	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-SAS-BP
Teacher Reference: Student Activity 1 Solution	Create the Ludo Board	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-SAS
Teacher Activity 2	Roll the Die	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-TAS-BP
Teacher Reference: Teacher Activity 2 Solution	Roll the Die	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-TAS
Student Activity 2	Roll the Die	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-SAS-BP
Teacher Reference: Student Activity 2 Solution	Roll the Die	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-SAS
Teacher Activity 3	Take Turns to Roll the Die	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-TAS-BP
Teacher Reference: Teacher	Take Turns to Roll the Die	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-TAS

Activity 3 Solution		
Student Activity 3	Take Turns to Roll the Die	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-SAS-BP
Teacher Reference: Student Activity 3 Solution	Take Turns to Roll the Die	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-SAS
Student's Additional Activity 1	Modify the Board Design	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-SAS-BP
Teacher Reference: Student's Additional Activity 1 Solution	Modify the Board Design	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-SAS
Student's Additional Activity 2	Use Two Dice	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-SAS-BP
Teacher Reference: Student's Additional Activity 2 Solution	Use Two Dice	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-SAS
Post Class Project	TAMBOLA STAGE -2	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-PCP-BP
Teacher Reference: Post Class Project Solution	TAMBOLA STAGE -2	https://github.com/Tynker-Computer-Networks/TNK-M15-C114-PCP