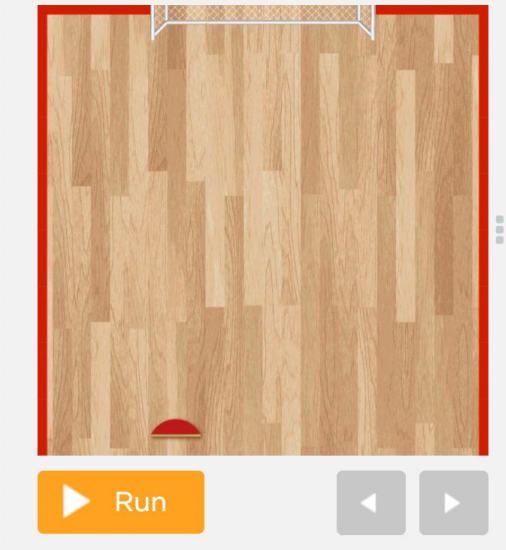
Session Code	CODR-58-BC-003
Module	Basic
Teaching Unit	Event
Learning Outcome	Events and its use:Create a small game(Ball bounce)
Resources	Teacher: 1. Login credentials to the activity platform 2. Laptop along with audio and video exchange 3. Notebook and Pen(To note any development from session) Student Resources 1. Login credentials to the activity platform 2. Laptop along with audio and video exchange 3. Notebook and Pen(To keep note of important parts in the session)
Duration	50 Mins

Structure	**Warm-up** **Pace-up Activity** **Knowledge Transfer** **Student Led Activity** **Short Quiz** **Heads up tip for next class**	2 Mins 5 Mins 10 Mins 20 Mins 8 Mins 5 Mins

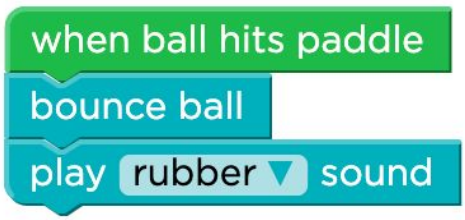
Step	Say	Perform
Warm up (2 Mins)	Hello <*student name*>! How have you been doing? Are you excited about today's session? Do you remember what we learned in last class?	Confirm with the student if he's able to see and hear the teacher clearly. Involve the student in talks.
	So, in the last class we learned about what **Variable is** and how to work with it. Also we learnt about **Data Types** and its use. Today, we will understand about **Events** and we will create a game using Events.	Check the DIY of the previous class. Clear doubts of the student on the previous topic (if any) and introduce the session's topic.
Pace-up activity (5 Mins)	Do you remember our demo class? We created a game where game characters were reacting to the mouse click? Click is an example of an Event. So you see, **Event is an action or trigger that makes something happen.** Let us understand events with a real-life scenario. Q. What happens when you feel hungry? A. You eat food. Feeling hungry is an event and it triggers us to eat food. Learn us understand some more events we use daily.	Motivate the student to answer the question, provide hints if he's catching up. This has to be an interactive part. Sample answer is provided hereby.
Share your screen to show the pdf of slide about event: teacher activity 1		
	When you press a key on your keyboard, it types on your computer.	Teacher Activity 1

	This is a keyboard event. We also use mouse events, like mouse click. When we want to select an item, we use left-click on our mouse. Programmers use events to create interactive apps or games. Today we are going to use Event to create a simple but interesting game.	**(PDF for Slides about variable)**  When you press a key on the keyboard of your system, it types the letter on the document.
Knowledge Transfer using an activity (10 Mins)	Today we will create a **Ball bounce game**. It consists of a ball and a paddle. You score a point each time you make a successful goal. Let me show you the game. We will learn different events in this activity. As you can see the basic objects for the design are already present. Q. What are the basic objects you find on the screen? A. There is a paddle which is controlled by the user, this is used to make the ball bounce towards the goal and the wall will block the ball from going out of the screen.	Open Teacher Activity 2  Click on Remix. Sign-in with your code.org credentials. Encourage the student to answer the question.

	 We will keep the game simple. However, we will have some basic design rules. **1. When run, there must be one ball launched into the game.** **2. Paddle should move so as to hit the ball. This movement will be in response to user right and left arrow key movement.** **3. When the ball hits the paddle or the wall, it should bounce.** **4. We can add sound effects in the game as well.** Now we will define the scoring rules. **5. We score a point for each successful goal, and 2 new balls will be launched into the game to make the game harder and interesting.** **6. Each time the ball misses the paddle, the opponent will get a point.** Great! Now that we know all the	Share the rules on the chat with the student.

	rules, let's code the game. You can see some codes are added into the workspace. These are different events.  Q. Do you remember rule 1? A. When we run, we should launch a new ball.  event triggers the computer to execute the codes written in the code block that follows "When Run", when you press the Run button. It is basically the start of the game. **For rule 1, code elements will be**  Now we will learn more events.	Encourage the student to answer the question.

	For rule 2, we need to understand **arrow key events**. "When left arrow" event is triggered when we press the left arrow on our computer keyboard or the arrow key present on the screen. For moving the paddle, we need to use "When left arrow" and "When right arrow" events. **Code elements will be**  For rule 3, the ball should bounce when it hits the paddle and the wall. **Code elements will be**   For rule 4, we can add sound effects in the game. Let us add a sound effect when the ball hits the paddle. Q. Can you tell me which event should we use for this? A. Yes, we should add codes after "When ball hits paddle". **Code elements will be**	Encourage the student to answer the question.



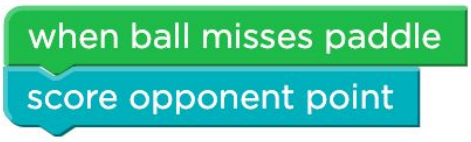
Great! We completed the design rules. Now let us code for the scoring rules.

For rule 5, we score a point for each successful goal, and 2 new balls will be launched into the game to make the game harder and interesting.

So to accomplish this, we will use “When ball in goal” event. This will get triggered when the ball gets inside the goal.
Code elements will be

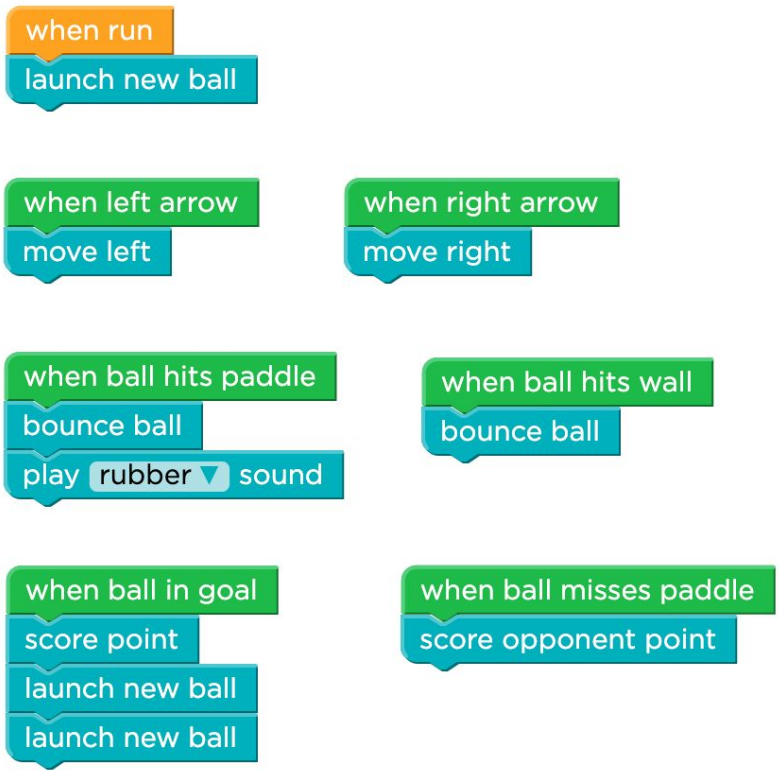
For rule 6, each time the ball misses the paddle, the opponent will get a point.

Code elements will be



We see that all the green blocks are

	kept independently. This is because **the codes related to a particular event will execute when that event is called, not before that.** For example, the paddle will move right only when we press the right arrow key. Great! This completes our code. Now let us Run and play the game. Wow! It looks perfect and fun too!	



Teacher stops the screen sharing		
	Very well. Now why don't you build the game by yourself?	Motivate and tell the student that we'll complete the task easily.
• **Ask student to share the screen and guide him for the same** • **Take the student to the respective activity platform**		
Student Driven Activity (20 Mins)	Now you will build the same game.	Help the student to share the screen.

	Before starting with the code, let's revise the rules. Great job! Now that you have built your first game, let's give it a name and save it. To do this, click "**Rename**". 	Make the student login on the activity platform. Student Activity 1 Let the student answer the questions and guide them whenever required. Let the student add additional rules to enhance the game.
Teacher helps student to stop the screen sharing		
Short Quiz (8 Mins)	Today, we got to know what the importance of Event is, right? If you have any doubt, ask me! Let us have a small questionnaire to check how much you know! Q. What is an Event? A. Event is an action or trigger that makes something happen. Q. Why are event blocks independently placed? A. This is because the codes related to a particular event will execute when that event is called, not before that Q. What are arrow key events? A. Arrow key events are triggered when we press the arrow on our computer keyboard or the arrow key present on the screen. That's great. So the concept of **Event** is clear now.	Give a short revision about what was learned and what was done in the session. Appreciate the student for his concentration and grasping in the session.
Heads up tips for next class (5 Mins)	And your DIY for the class will be to create a similar game but this time	Motivate the student to try homework on his own

	with a basketball. From next class we'll learn more advanced concepts and have fun.	and ask him to implement ideas of events.
BID GOOD BYE & END CLASS		

Resources:

Activity	Name	Links
Teacher Activity 1	PDF on Events.	https://drive.google.com/file/d/1XvLuwpBLuFV9xsbPjFqAiVQnKAM0X93B/view?usp=sharing
Teacher Activity 2	Code.org (Bounce)	https://studio.code.org/projects/bounce/8S5EYUnZCw2GSe3lvQRJZ7svC5Mo2LAUHxzo2TuCTqA
Student Activity 1	Code.org (Bounce)	https://studio.code.org/projects/bounce/8S5EYUnZCw2GSe3lvQRJZ7svC5Mo2LAUHxzo2TuCTqA
Homework Activity 1	Code.org (Basketball)	https://studio.code.org/projects/basketball/duggZxqca7SaHE9G8k-RauSQITIAjdvOU1mtxJyJ9CQ