2 Programming Concepts in Scratch

Activity: Work the following exercises as directed by your tutor:

Purpose of this Activity

This activity aims to give you an understanding of the important programming concepts by using the Scratch development environment.

Learning Outcomes

- To be able to understand in Scratch the fundamental programming concepts:
  - Sequence
  - Iteration
  - Conditional statements
- To be able to create a simple program incorporating and applying the above programming concepts.

Task 1
Follow the "hiphopdancer" live demo by your tutor. This will give you an introduction to the programming concepts.

Task 2
Create the following "dancing cat" game:
- A cat is performing a small dancing step moving forward and backward a fixed number of steps (e.g. 10).
- For each direction of movement, a different drum sound is played.
- After each dancing step, the cat moves forward some steps and then repeats the dancing step.
- When the cat touches the edge of the screen, it should bounce (not disappear from the screen).
- *(extension activity):* make the cat change costumes between the two movements of the dancing step.

Follow-up Task

Create a table in Word which will consist of three columns:
1st column: **Programming concept** such as: sequence, iteration, conditional statements, variables, event handling, threads, keyboard input, random numbers.
2nd column: **Explanation** of the same row corresponding programming concept using 2-3 lines.
3rd column: **Example** of the same row corresponding programming concept using Scratch blocks.