



**COLLEGE OF BUSINESS, PEACE, LEADERSHIP AND GOVERNANCE**

**NCSE 204: VISUAL PROGRAMMING**

**END OF SECOND SEMESTER EXAMINATIONS**

**NOVEMBER 2021**

**LECTURER: MR MUKHALELA**

**DURATION: 5 HRS**

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### ***INSTRUCTIONS***

This is an open book Competence based Examination.

Answer any **ALL** questions in Section A. Submit answer for this section as code(s) and output as screenshots via **email:** [mukhalelab@africau.edu](mailto:mukhalelab@africau.edu). Answer any **ONE** question in Section B as essay type answers and submit via **Moodle**.

The marks allocated to **each** question are shown at the end of the section. Include citations where possible in your essay type answers.

Credit will be awarded for logical, systematic and neat presentations.

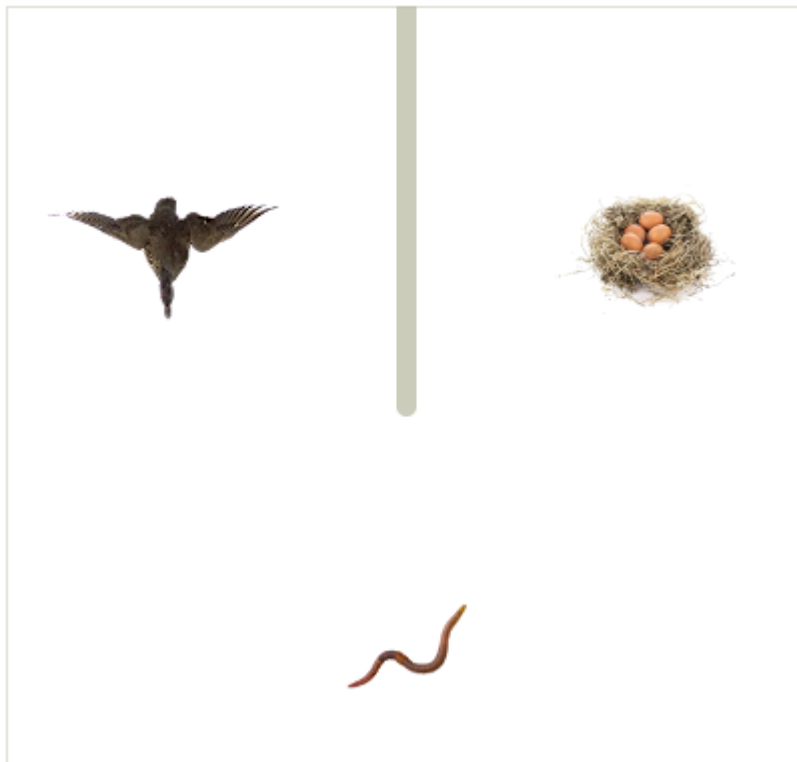
## Section A- Compulsory

### Question 1 Scratch Programming [20 marks]

Design a Bird-Worm Game using Scratch. The game should at least include the following elements:

- Score counter
- Level of Difficulty selector
- appealing background image related to your Game theme.

NB: Creativity will add you more credit. Your game may loosely take the following GUI or better.



### Question 2 Blockly Programming [60 marks]

Log on to the following URL <https://blockly.games/maze?lang=en&level=9&skin=0> and attempt the Maze Game Programming from Lab 1 through to 10. Save your success in a folder where each level success code shall be saved as e.g. level 1 code. The Maze level 9 game programming canvas has been shown here in as your guide.

move forward

turn left ↶

turn right ↷

repeat until [red pin]

do

move forward

If-else blocks will do one thing or the other.

if path ahead

do

else

You have 6 blocks left.

Run Program

## Section B

Answer any one question in this section.

1. Write an essay articulating any benefits presented by Visual Programming Languages over text-based languages. Can VPL really be harnessed in industrial or commercial software development. (20)
2. 'Data mining can best be accomplished via VPL like Orange,' said an expert Visual Programmer. Pivoted on this statement write a summary on how Orange can be harnessed as a VPL. Show screenshots of your illustrations. (20)