National College of Ireland

Configuration Manual

MSc Research Project
Programme Name

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School of Computing
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MSc Project Submission Sheet

School of Computing

Student Name: ……. Oritsejolomi Sillo……

Student ID: ……22129332……..……

Programme: ……Cloud Computing…… **Year:** ……2024……..

Module: ……Research Project……..……

Lecturer: …… Aqeel Kazmi……..……

Submission Due Date: ……12/08/24……..……

Project Title: Investigating Multi-Agent Reinforcement Learning for adaptive cost-optimized storage allocations within cloud environments

…… **Page Count:**

Word Count: ……..……

I hereby certify that the information contained in this (my submission) is information pertaining to research I conducted for this project. All information other than my own contribution will be fully referenced and listed in the relevant bibliography section at the rear of the project.
ALL internet material must be referenced in the bibliography section. Students are required to use the Referencing Standard specified in the report template. To use other author's written or electronic work is illegal (plagiarism) and may result in disciplinary action.

Signature:……O.C SILLO……

Date: ……12/08/24……

PLEASE READ THE FOLLOWING INSTRUCTIONS AND CHECKLIST

Attach a completed copy of this sheet to each project (including multiple copies)	□
Attach a Moodle submission receipt of the online project submission, to each project (including multiple copies).	□
You must ensure that you retain a HARD COPY of the project, both for your own reference and in case a project is lost or mislaid. It is not sufficient to keep a copy on computer.	□

Assignments that are submitted to the Programme Coordinator Office must be placed into the assignment box located outside the office.

Office Use Only	
Signature:	
Date:	
Penalty Applied (if applicable):	

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1 Prerequisite

1. Python 3.7 or higher
2. Jupyter Notebook
3. Java Development Kit (JDK) 11 or higher
4. CloudSim toolkit

2 Install Cloudsim

Cloudsim is required for this project, please follow this tutorial on how to install it but use Cloudsim 5.: https://www.youtube.com/watch?v=r38GAwmPmm8

3 Set up JupyterNotebook

- Open a terminal or command prompt.
- Navigate to the directory containing your Jupyter notebook.
- Create a new virtual environment (optional but recommended):
- Copy; python -m venv cloudsim_env
- Activate the virtual environment:
- On Windows: cloudsim_env\Scripts\activate
- On macOS and Linux: source cloudsim_env/bin/activate

4 Run the cloudsim springboot app

- Before running the Jupyter cells, you must start the cloudsim springboot application:
- Open your Java IDE (e.g., Eclipse, IntelliJ IDEA).
- Load the cloudsim project.
- Locate the CloudSimEntryPoint class.
- Run this class as a springboot application.
- Keep this springboot application running while working with the Jupyter notebook.
- **Step 5: Run the Jupyter Notebook**
- Start Jupyter Notebook
- Open the CloudSim evaluation notebook.
- Run each cell in order, starting from the top.

References