

Configuration Manual

MSc Research Project
MSc Cloud Computing

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MSc Project Submission Sheet
School of Computing



Student Name: Harsh Harendra Singh Mall
Student ID: 21223572
Programme: MSc Cloud Computing **Year:** 2022-23
Module: MSc Research Project
Lecturer: Diego Lugones
Submission Due Date: 14/08/2023
Project Title: A Comparative Study of Metaheuristic Algorithms for Enhancing Topology-Aware Scheduling in Kubernetes
Word Count: 5169 **Page Count:** 20

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: Harsh Harendra Singh Mall
.....

Date:10/08/2023.....

PLEASE READ THE FOLLOWING INSTRUCTIONS AND CHECKLIST

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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.	<input type="checkbox"/>

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

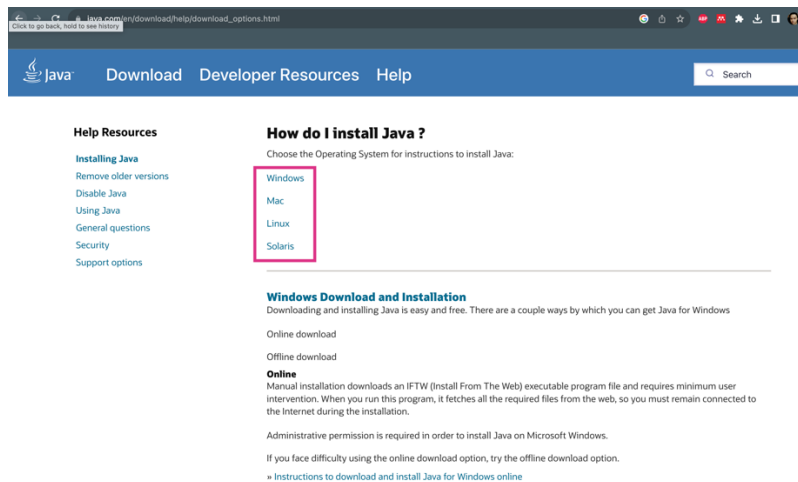
Office Use Only	
Signature:	
Date:	
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Configuration Manual

Harsh Harendra Singh Mall
Student ID:

1 Install JAVA

Install JAVA from the below website choose your OS and follow the steps. (Manual, 2023)



2 Install Eclipse

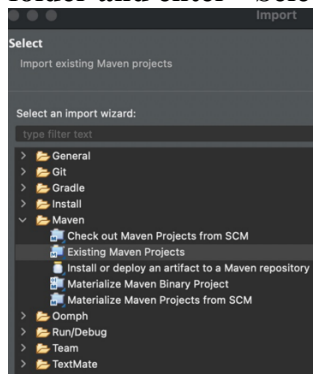
Install eclipse (Eclipse IDE for Java Developers)

<https://www.eclipse.org/downloads/>

3 Import project in Maven

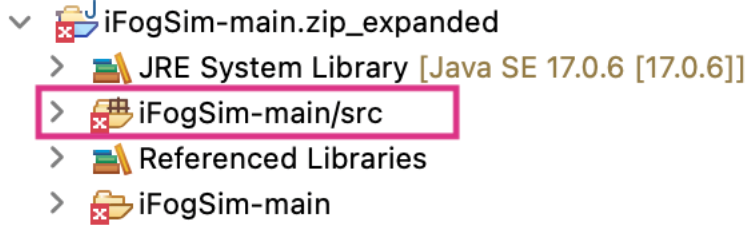
Use Maven in Eclipse for installing the project-
In Eclipse:

go to file -> import -> Maven -> existing Maven project - Select the unzipped research folder and enter - Select all and finish

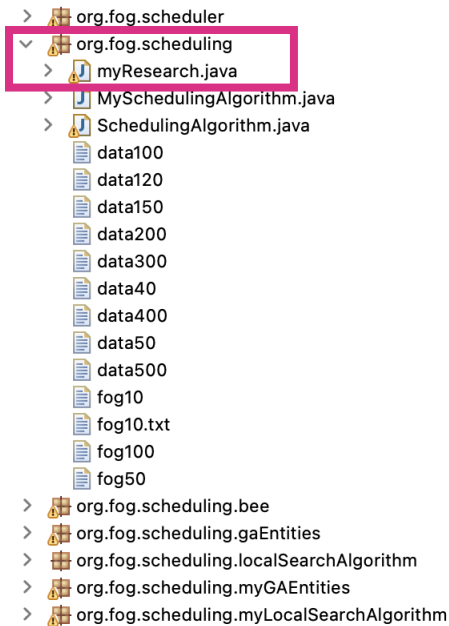


4 Steps to run the project

After Importing, Select the below folder.



Then select **org.fog.scheduling** package and in that package select **myResearch.java** file.



Run the myResearch.java file. Make sure you have all the folders and files properly imported.

5 Code change

Give the path to these data files and json files

```
package org.fog.scheduling;

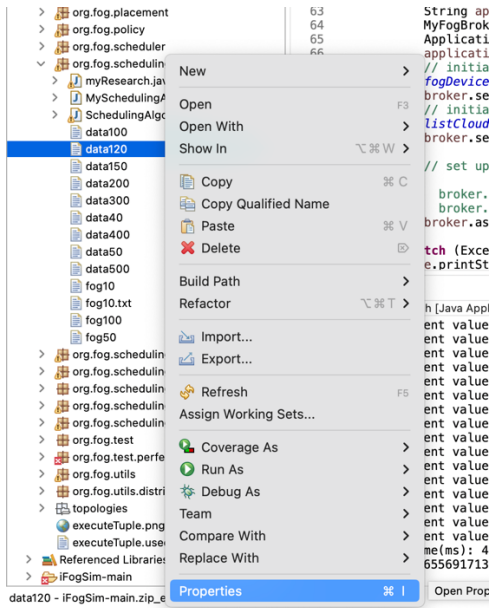
import java.io.BufferedReader;

public class myResearch {
    static List<FogDevice> fogDevices = new ArrayList<FogDevice>();
    static FogDevice cloud;
    static List<Cloudlet> listCloudlet = new ArrayList<Cloudlet>();
    private static final String COMMA_DELIMITER = ",";

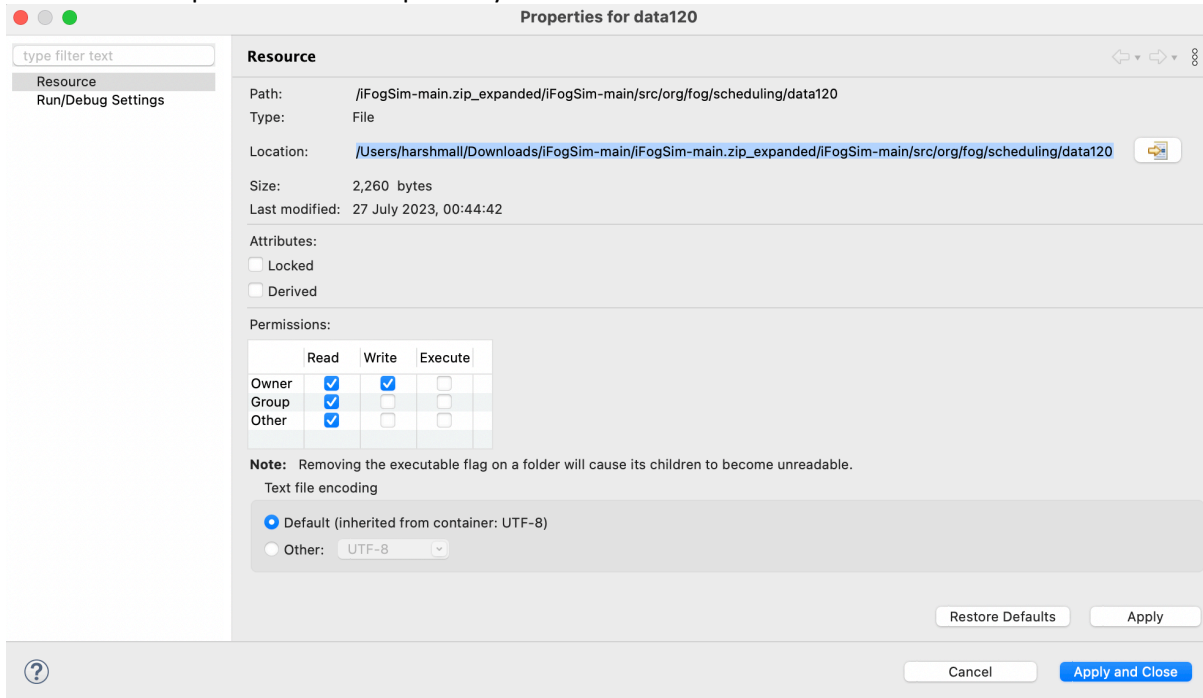
    public static String fileName = "/Users/harshmall/Downloads/iFogSim-main/iFogSim-main.zip_expanded/iFogSim-main/src/org/fog/scheduling/fog10";
    public static String filename_cloudlet = "/Users/harshmall/Downloads/iFogSim-main/iFogSim-main.zip_expanded/iFogSim-main/src/org/fog/scheduling/data50";
    public static void main(String[] args) {
        Log.println("Starting scheduling simulation...");
        try {
            Log.disable();
            int num_user = 1; // number of cloud users
            Calendar calendar = Calendar.getInstance();
            boolean trace_flag = false; // mean trace events
            CloudSim.init(num_user, calendar, trace_flag);
            String appId = "scheduler"; // identifier of the application 2413793103448276
            MyFogBroker broker = new MyFogBroker("broker");
            Application application = createApplication(appId, broker.getId());
            application.setUserId(broker.getId());
            // initiate the fog-cloud devices list from json file
```

6 How to find path?

Right click on the file that you want to find the path of



Then Select Properties and in Properties you will find the link to the desired file



7 Click on Run

References

Manual, J. D., 2023. *JAVA Download Manual 2023*. [Online] Available at: <https://www.java.com/en/download/manual.jsp>

