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*\* Project: Time Table Project*

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**User Manual**

**(Note: The computer used for running this software should have java 8 jdk installed. For running in console mode, installation process is a little bit complicated)**

**(Warning**: Should make a copy of this package before using it)

This package TimeTableProject contains three sets of code and data and this user manual which are listed as follows:

1 StudyOfTimeTableDataAndResults\_CodeAndData

2. StudyOfTimeTableDataProvidedAndResults\_CodeAndData

3. TestTimeTableProjectMethodsWithJUnit\_Code

4. This user manual:

(File name: TimeTableProjectVer1UserManual).

**Items included in StudyOfTimeTableDataAndResults\_CodeAndData:**

**(This set of code and data is for general use)**

1. A folder named StudyOfTimeTableDataAndResults\_JavaCode. Inside it there are 10 classes and 9 interfaces. The main class is Launcher.java.
2. A folder named StudyOfTimeTableDataAndResults. It contains three csv files: a sample draft time table **DraftTimeTable.csv**, a sample module list **ModuleList.csv** (module numbers and student numbers) and a sample room list **RoomList.csv** (room numbers and their accommodation capacity). Format of relevant parts of the aforesaid three files are the same as those provided and contained in the second set of code and data StudyOfTimeTableDataProvidedAndResults\_CodeAndData. This folder also contains an xml file **savexml.xml**. Please **do not alter or delete this file**, it is required to be putting here for execution of the Windows exe file mentioned below.
3. Description of the requirements for forming the three data files as mentioned in 2. above:

1/ They must use the names as stated.

2/ DraftTimeTable.csv:

(No restriction on columns not mentioned herebelow. Column index start from 0)

Column index 0 (Programme): this is the only column permits using comma and maximum number of comma in each cell is 4.

Column index 1 (Module Code): Module code should be in the form of two English alphabets and then followed by 4 digits. Example: KY3497, cN6245.

Column index 3 (Category): either “Lecture”, “Practicals” or “Tutorial” (no quotation marks).

Column index 4 (Term): either “1”, “2”, “3” or any combinations of them with “&” as the separator such as “1&3”, “1&2&3” (no quotation marks).

Column index 5 (Day): days of the week in full spelling or, for example, “Mon/wed/Fri” or “Tue-SAt” (no quotation marks).

Column index 6(Start): time in 24-hour format. For example: 09:30, 13:00

Column index 7(End): time in 24-hour format.

Column index 8(Hours): For example: 01:30, 03:00.

Column index 11(Staff): If there are more than one teacher, use slash(“/”) to separate them. Example: “Albus Dumbledore”, “Minerva McGonagall/Severus Snape”(no quotation marks).

Column index 13(Room type): Room numbers. If more than one room, use slash(“/”) as the separator. Example: “EB.1.07”, “MLT”, “ITC03/KD.2.28/EB.2.44”(no quotation marks).

3/ ModuleList.csv:

(No restriction on columns not mentioned herebelow. Column index start from 0)

Module Code should be at column index 0 and please refer to column index 1 of DraftTimeTable.csv mentioned above for its format.

Student number of a module should be at column index 1 at a subsequent line (or lines) after the row containing the module code. Preceding a student number (that is, at column index 0) there must be one and only one word “Count”(no quotation marks). Example: ”Count,67”. If a module has been given more than one number, only the maximum one will be used.

4/ RoomList.csv:

(No restriction on columns not mentioned herebelow. Column index start from 0)

Room number at column index number 0 and room capacity at column index number 3. Example: “EB.1.42,???,East Building,37”, “EB.1.42,,,37”(No quotation marks).

4. A jar file StudyOfTimeTableDataAndResults.jar which is a zip file of the java files contained in the folder StudyOfTimeTableDataAndResults\_JavaCode mentioned above.

5. An exe file StudyOfTimeTableDataAndResults.exe which is a Windows exe file converted from StudyOfTimeTableDataAndResults.jar with Launch4j.

**Items included in StudyOfTimeTableDataProvidedAndResults\_CodeAndData:**

**(This set of code and data is for analysing data files provided only)**

Items included in this set is the same as those contained in StudyOfTimeTableDataAndResults\_CodeAndData except corresponding names are changed accordingly and:

In StudyOfTimeTableDataAndResults, module information is required to contain in one file (ModuleList.java). However, there are two module lists provided, namely, (SM0469.csv and SM0477.csv). Some of the modules listed in the two files are overlapped. Whenever such scenario encountered, only the student number contained in SM0469.csv will be used. Since having to deal with two module lists, the class InputAndTidyUpModuleList.java is not identical to that StudyOfTimeTableDataAndResults.

Please also note that in this set, there is a significant number of modules listed on the draft time table timetable-example.csv but not listed on the module lists and vice versa. These modules cannot be analysed and warnings are given at results.

**Items included in TestTimeTableProjectMethodsWithJUnit\_Code:**

Included in this set are classes containing methods copied from the StudyOfTimeTableDataAndResults\_JavaCode and their JUnit test classes. A project may be set up in an IDE with all classes and test classes of this set properly placed there and run and observe the tests. The said unit tests can also be run in console mode provided that Junit4 has been properly installed in the computer.

**Installation and operation methods of StudyOfTimeTableDataAndResults\_CodeAndData and StudyOfTimeTableDataProvidedAndResults\_CodeAndData:**

1. Run the jar or the exe files: copy and paste the jar and/or the exe files and the data folder on Windows desktop. Make sure the data folder contains all required csv format data files and the xml file savexml.xml. Click on the jar or the exe file icon. A window states the four tasks which can be performed will pop up. Click on the task(s) intend to be performed and then a further window for each task clicked will then pop up informing the location and the name of the file created for containing the results. Then close the windows. File names are in the form of Task[number]\_[date and time].csv (for Task1, Task2 and Task3) or .txt (for Task4). Example: Task2\_1712181324.csv, Task4\_1712181324.txt. Files created for containing results are located at the same folder for storing data files and the xml file. It is advised that for showing proper format of txt files created, they should be opened with Wordpad, Notepad++ or other similar code editors, not Notepad.

2. Run the java files: either (1) set up a project in an IDE (eclipse, intellij or otherwise) and place all java files in it, place the corresponding data folder in the module root directory and then run Launcher.java; or (2) place all java files and the corresponding data folder in a directory and run Launcher.java at console. The rest are the same as stated in 1. above.

**Change of data file names and their paths:**

Deviation from the data filenames and path arrangements as mentioned herein is **not recommended**. However, all path and filename information are kept at the beginning of Launcher.java as string variables and they can be changed if required.

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