

# LABs Reservation System

- sem451
  - DataTasks.java
  - FileNames.java
  - KkuSystem.java
  - LabRoom.java
  - OptionalReserveTasks.java
  - People.java
  - Person.java
  - ReserveBlock.java
  - ReserveTasks.java
  - Room.java
  - Student.java

```
Welcome to KKKU LAB Managment System
2023-11-19 | 02:25:18
```

- ```
=====
1. Make a reservation + New User
2. Update a reservation
3. Print all reservations on screen
4. Print reservations to File
5. Exit
6. Remove Reservation
7. Create New User
8. Print all users on screen
9. Remove User
```

```
Please Enter a number:
```

```
Please Enter a number:1
```

```
Enter person name, id, age (press Ent
Ahmad
```

```
445-234-110
```

```
34
```

```
Ahmad has been added.
```

```
No. of users is: 1
```

```
Enter room name:
```

```
LAB-18-S
```

```
Enter Date in yyyy-mm-dd:
```

```
2023-12-12
```

```
At what Clock 1-24 (Only 1 hour can b
4
```

```
Done, Room LAB-18-S booked in 2023-12
```

```
Please Enter a number:3
```

```
Session [18S-1-B13, 2023-12-12, at 5,
Session [LAB-18-S, 2023-12-12, at 4,
```

```
Please Enter a number:5
```

```
Saving...
```

- DataTasks
  - saveDataToFile() : void
  - loadDataFromFile() : void

- ReserveTasks
  - reserveBlock(ReserveBlock) : boolean
  - updateBlock(ReserveBlock) : boolean
  - removeBlock(ReserveBlock) : boolean
  - removeAllEndedBlocks() : void
  - printReservedBlocks(List<ReserveBlock>) : void
  - loadDataFromFile() : boolean
  - saveDataToFile() : boolean

- OptionalReserveTasks
  - findReservedBlocksBy(Person) : List<ReserveBlock>
  - findPeopleReservedBlock(ReserveBlock) : List<Person>
  - findHoursForReservedBlock(ReserveBlock, LocalDate) : List<Integer>
  - findDatesForReservedBlock(ReserveBlock) : List<LocalDate>
  - findReservedBlockAt(int) : List<ReserveBlock>
  - findReservedBlockAt(LocalDate) : List<ReserveBlock>
  - findReservedBlockAt(LocalDate, int) : List<ReserveBlock>

- Room
  - name : String
  - location : String
  - length : float
  - width : float
  - window : boolean
  - secDoor : boolean
  - Room(String)
  - hasWindow() : boolean
  - setWindow(boolean) : void
  - hasSecDoor() : boolean
  - setSecDoor(boolean) : void
  - toString() : String
  - getArea() : float
  - getName() : String
  - setName(String) : void
  - getLocation() : String
  - setLocation(String) : void
  - getLength() : float
  - setLength(float) : void
  - getWidth() : float
  - setWidth(float) : void

- FileNames
  - SESSIONS\_FILE : String
  - PRINT\_FILE : String
  - PEOPLE\_FILE : String
- LabRoom
  - numberOfPc : int
  - vdi : boolean
  - store : boolean
  - dataShow : boolean
  - note : String
  - LabRoom(String)
  - LabRoom(String, int, boolean)
  - getNote() : String
  - addNote(String) : void
  - clearNote() : void
  - getNumberOfPc() : int
  - setNumberOfPc(int) : void
  - isVdi() : boolean
  - setVdi(boolean) : void
  - isStore() : boolean
  - setStore(boolean) : void
  - isDataShow() : boolean
  - setDataShow(boolean) : void

```

v People
  people : Map<String, Person>
  People()
  howManyPeople() : int
  clearAllPeople() : void
  printPeople() : void
  addPerson(Person) : boolean
  addPerson(String, String, int) : boolean
  removePerson(String) : boolean
  getPersonById(String) : Person
  loadDataFromFile() : void
  saveDataToFile() : void

```

```

v Person
  name : String
  id : String
  age : int
  blocked : boolean
  Person(String, String, int)
  toString() : String
  name() : String
  rename(String) : void
  getId() : String
  setId(String) : void
  getAge() : int
  setAge(int) : void
  isBlocked() : boolean
  setBlocked(boolean) : void

```

```

v Student
  major : String
  gpa : float
  level : int
  Student(String, String, int)
  getMajor() : String
  setMajor(String) : void
  getGpa() : float
  setGpa(float) : void
  getLevel() : int
  setLevel(int) : void

```

```

v ReserveBlock
  by : Person
  d : LocalDate
  clock : int
  room : Room
  ReserveBlock(Person, LocalDate, int, Room)
  equals(ReserveBlock) : boolean
  toString() : String
  getBy() : Person
  setBy(Person) : void
  getDate() : LocalDate
  setDate(LocalDate) : void
  getClock() : int
  setClock(int) : void
  getRoom() : Room
  setRoom(Room) : void

```

```

v KkuSystem
  reservations : List<ReserveBlock>
  people : People
  showCLIMenu() : void
  main(String[]) : void
  reserveBlock(ReserveBlock) : boolean
  checkExist(ReserveBlock, List<ReserveBlock>) : boolean
  updateBlock(ReserveBlock) : boolean
  removeBlock(ReserveBlock) : boolean
  removeAllEndedBlocks() : void
  printReservedBlocks(List<ReserveBlock>) : void
  loadDataFromFile() : boolean
  saveDataToFile() : boolean
  exportToFile2() : boolean
  save() : void
  load() : void

```

## Instructions

- Due date will be on Bb.
- You need to submit GitHub link that shows the code after editing
- Issues email me [mmbashar@kku.edu.sa](mailto:mmbashar@kku.edu.sa)

## Questions

1. Install the project code from <https://github.com/MohammadAlasmary/ReservationSystem/>
2. If you know how to import it using Eclipse, go to step.6
3. Create a new Java project with any name using Eclipse
4. Inside the project, create a package with name sem451
5. Copy all the java files from ...\\RoomReserve.zip\\Room Reservation\\src\\sem451\\ to the created package to be as the first image
6. Try to run the code several times and study its issues
7. Try to understand the project with help of class diagrams
8. Fix the code to handle any errors might happen from the user during writing date, time, or age.
9. Implements at least one method from OptionalReserveTasks inside KkuSystem class
10. Create a separate class for ReserveBlockList as people for Person class to manage all of its functions
11. When you are done, fork and upload your code on your GitHub account and submit the link.