


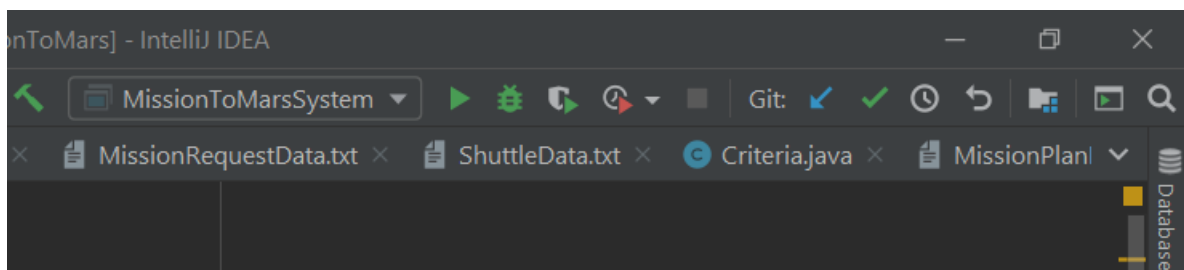
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1. Installation guideline

a. Set up

To install the Mission to Mars system, you need to have IntelliJ IDEA or any other JAVA IDE in your computer. Once you set up the java environment in your PC, you need to open the project in your IDE. Then click the RUN button  to run the system.



b. Login/logout

The first screen provides you two options. One is sign up, the other one is login. Sign up is not our requirement. Therefore, we press enter 2 to go to login screen.

```
***** Welcome to Mission to Mars System! *****
--- Please enter the number below to select your option
--- 1. Sign up for new candidates
--- 2. Login to your account
--- Enter your option:
```

For mission coordinator, the username is Michael and the password is 123. For administrator, the username is Haoran Zhang and the password is 123.

```
***** Welcome to Mission to Mars System! *****
--- Please enter your login credentials
--- Please enter your username:
Michael
--- Please enter your password:
123
You are successfully log in
```

After mission coordinators login, they will see the mission coordinator home screen. If they want to logout, they can enter option 4 to logout the system.

```
***** Welcome Michael to Mission to Mars System! *****
Account type: Mission Coordinator
--- Please enter the number below to select your option
--- 1.Create new mission
--- 2.View existing missions
--- 3.Edit mission
--- 4.Log out
--- Enter your option:
4
Quitting the system
```

Once administrators login the system, they will see the different home screen which include more option. Similarly, administrators can enter option 7 to logout.

```
***** Welcome Haoran Zhang to Mission to Mars System! *****
Account type: Administrator
--- Please enter the number below to select your option
--- 1.View existing missions
--- 2.Edit mission
--- 3.Select a shuttle
--- 4.Create selection criteria
--- 5.Edit the criteria
--- 6.Find and select best candidates
--- 7.Log out
--- Enter your option:
1
```

c. Create a mission

Once users want to create a mission, they will fill in the attributes of the mission request step by step.

```
***** Create new mission *****
--- 1. Please enter mission name (Press enter to save)
Mission one
--- 2. Please enter mission description (Press enter to save)
build road on Mars
--- 3. Please enter country of origin (Press enter to save)
US
--- 4. Please enter country allowed (Press enter to save)
US
--- 5. Please enter coordinator's name (Press enter to save)
Michael
--- 6. Please enter coordinator's contact information (Press enter to save)
0123456789
--- 7. Please enter job name (Press enter to save)
build road
--- 8. Please enter job description (Press enter to save)
build road
--- 9. Please enter title of employment required (Press enter to save)
builder
--- 10. Please enter number of employment required (Press enter to save)
5
--- 11. Please enter what the cargo used for (Press enter to save)
---Please select from:
1. For the journey
2. For the mission
3. For other missions
2
--- 12. Please enter cargo required for (example:concrete, desserts, water)
concrete
```

```
--- 13. Please enter cargo quantity for (Press enter to save)
1
--- 14. Please enter launch date (date format example: 01/06/2020)
01/01/2025
--- 15. Please enter location of destination (Press enter to save)
Mars base
--- 16. Please enter duration of mission in years (input example: 2.15)
2.16
--- 17. Please enter status of mission (Press enter to save)
---Please select from:
1. Planning phase
2. Departed Earth
3. Landed on Mars
4. Mission in progress
5. Returned to Earth
6. Mission completed
1
the mission has successfully been created
```

d. View existing mission

Once the mission has been created, users can view the existing mission. They can choose the mission that they want to view in the mission list.

```
***** Mission Request List *****
Which mission you want to choose?
1. mission 3
2. Mission 2
3. Mission 3
4. Mission 4
5. Mission one
Press 0 to go back to previous screen
Press enter you option
```

e. Edit mission

Once users want edit the mission, they can choose a mission that they want to view in the mission list.

```
***** Mission Request List *****
Which mission you want to choose?
1. mission 3
2. Mission 2
3. Mission 3
4. Mission 4
5. Mission one
Press 0 to go back to previous screen
Press enter you option
5
```

Then, the mission detail will be displayed. Users can choose one of the attribute to modify its data.

```
1.Mission name: Mission one
2.Mission description: build road on Mars
3.Country of origin: US
4.Country allowed: US
5.Coordinator name: Michael
6.Coordinator contact information: 0123456789
7.Job name: build road
8.Job Description: build road
9.Title of employment required: builder
10.Number of employment required: builder
11.Cargo for what kind of mission: For the mission
12.Cargo required for: concrete
13.Cargo quantity: 1
14.Launch date:01/01/2025
15.Location of destination: Mars base
16.Duration: 2.16
17.Status of mission: Planning phase
Press 0 to go back to previous screen
Press -1 to go back to home screen
Which attributes you want to modify?
17
```

For example, users enter option 17 and change the mission status to Mission completed.

```
--- 17. Please enter status of mission (Press enter to save)
---Please select from:
1. Planning phase
2. Departed Earth
3. Landed on Mars
4. Mission in progress
5. Returned to Earth
6. Mission completed
6
```

If they view the mission detail again, they will found the mission status has been changed.

```
1.Mission name: Mission one
2.Mission description: build road on Mars
3.Country of origin: US
4.Country allowed: US
5.Coordinator name: Michael
6.Coordinator contact information: 0123456789
7.Job name: build road
8.Job Description: build road
9.Title of employment required: builder
10.Number of employment required: builder
11.Cargo for what kind of mission: For the mission
12.Cargo required for: concrete
13.Cargo quantity: 1
14.Launch date:01/01/2025
15.Location of destination: Mars base
16.Duration: 2.16
17.Status of mission: Mission completed
Press 0 to go back to previous screen
Press -1 to go back to home screen
Which attributes you want to modify?
-1
```

So far, all the action that mission coordinator can take has been traduced.

f. Selecting a space shuttle

Once administrators want to select a shuttle for a mission, they can select from the mission list. Then the shuttle list will be displayed to ask administrator to select a shuttle.

```
***** Mission Request List *****
Which mission you want to choose?
1. mission 3
2. Mission 2
3. Mission 3
4. Mission 4
5. Mission one
Press 0 to go back to previous screen
Press enter you option
5
***** Select a shuttle for Mission one *****
The number of space shuttles:
1. magna.Sed
2. dapibus gravida
3. tristique neque
4. magna a
5. accumsan convallis
6. non egestas
7. eros. Nam
8. dui augue
9. tellus faucibus
10. gravida sagittis
11. nunc interdum
12. lacus varius
Press 0 to go back to previous screen
Press enter you option
12
```

Once the shuttle has been selected, the shuttle details will be displayed. Administrator can enter -1 to confirm the selection.

```
***** The information of space shuttle lacus varius *****
1.Shuttle name: lacus varius
2.Manufacturing year 02/09/2013
3.Fuel capacity: 491004413
3.Passenger capacity: 263
4.Cargo capacity: 1295
5.Travel speed: 31686
Press 0 to go back to previous screen
Press -1 to confirm selection
-1
Shuttle select successfully
```

Once the shuttle selection has been successful, the mission details and associated shuttle details will be displayed.

```
Current Mission Plan:
MissionRequest details:
1.Mission name: Mission one
2.Mission description: build road on Mars
3.Country of origin: US
4.Country allowed: US
5.Coordinator name: Michael
6.Coordinator contact information: 0123456789
7.Job name: build road
8.Job Description: build road
9.Title of employment required: builder
10.Number of employment required: builder
11.Cargo for what kind of mission: For the mission
12.Cargo required for: concrete
13.Cargo quantity: 1
14.Launch date:01/01/2025
15.Location of destination: Mars base
16.Duration: 2.16
17.Status of mission: Mission completed

Shuttle details:
1.Shuttle name: lacus varius
2.Manufacturing year 02/09/2013
3.Fuel capacity: 491004413
3.Passenger capacity: 263
4.Cargo capacity: 1295
5.Travel speed: 31686
```

g. Create selection criteria

Once users want to create a selection criterion, they can choose a mission from mission list. Then they can select a job title which need to create criteria for. After that, users need to fill the data of each attributes step by step.


```
***** Mission Request List *****
Which mission you want to choose?
1. mission 3
2. Mission 2
3. Mission 3
4. Mission 4
5. Mission one
Press 0 to go back to previous screen
Press enter you option
5
***** Create specific criteria *****
select a job title
1. builder
Press 0 to go back to previous screen
Press enter you option
1
***** Create specific policy forbuilder *****
--- Number of employees required: 5
--- 1. Please enter maximum of age for this job (Press enter to save)
100
--- 2. Please enter minimum of age for this job (Press enter to save)
10
--- 3. Please enter requirement of health record(Press enter to save)
no health issue
--- 4. Please enter requirement of criminal record(Press enter to save)
no criminal record
```

Once the criteria has been created, users can see the mission with associated shuttle and criteria.

h. Edit selection criteria

Once users want to edit selection criteria, they can select a mission from mission list and choose a job title. Then they can select which attribute they want to modify and enter the data for that attribute.

```

***** Mission Request List *****
Which mission you want to choose?
1. mission 3
2. Mission 2
3. Mission 3
4. Mission 4
5. Mission one
Press 0 to go back to previous screen
Press enter you option
5
***** Edit existing criteria for Mission one *****
select a job title
1. builder
Press 0 to go back to previous screen
Press enter you option
1
***** Edit specific policy forbuilder *****
Please enter your option:
1. maximum age: 100
2. minimum age: 10
3. health record: no health issue
4. criminal record: no criminal record
Press 0 to go back to previous screen
Press -1 to go back to home screen
1
--- 1. Please enter maximum of age for this job (Press enter to save)
99

```

i. Find best candidates

Once user want to find candidate who match the criteria, they can enter the number of candidate that they want to find. The system will find the best matching candidate for specified number.

```

How many candidates do you want to find
1
Collecting candidate's criminal and health record from third party.....downloading
Search result:
Candidate Name: Haoran

```

2. Troubleshooting

If users want to view existing missions, but system give an error message. That's because there is a blank line in the MissionRequestData.txt. The reason why this happen is that users may manually modify the MissionRequestData.txt. The error shouldn't happen at most time until users open the MissionRequestData.txt file and type in some words

instead of accessing the file through system. The solution is removing the blank line in the file.

```
***** Welcome Michael to Mission to Mars System! *****
Account type: Mission Coordinator
--- Please enter the number below to select your option
--- 1.Create new mission
--- 2.View existing missions
--- 3.Edit mission
--- 4.Log out
--- Enter your option:
3
Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: Index 2 out of bounds for length 1
    at MissionToMarsSystem.readMissionRequestFile(MissionToMarsSystem.java:263)
    at UserInterface.displayAllMissionNameList(UserInterface.java:122)
    at MissionToMarsSystem.viewExistingMission(MissionToMarsSystem.java:133)
    at MissionToMarsSystem.missionCoordinatorMenuControl(MissionToMarsSystem.java:367)
    at MissionToMarsSystem.missionCoordinatorMenuControl(MissionToMarsSystem.java:380)
    at MissionToMarsSystem.login(MissionToMarsSystem.java:106)
    at MissionToMarsSystem.main(MissionToMarsSystem.java:27)
```

```
MissionRequestData.txt
1 mission 3,establish a colony,Australia,Australia,Haoran,012345567,establish colony,establish colony,civil engineers,5,jounery,desserts,15,17,build road,31,Mission completed
2 Mission 2,establish a colony,Australia,Australia,Haoran,012345567,establish colony,establish colony,civil engineers,5,jounery,desserts,55,11/11/2020,buid road,22,11
3 Mission 3,establish a colony,Australia,Australia,Haoran,012345567,establish colony,establish colony,civil engineers,5,jounery,desserts,15,11/11/2020,Mars colony,31,planning phase
4 Mission 4,buid school,China,China,yiwei,wechat,buid road,buid a big road,civil,1,discover,water,4,20/2/20,China,1,planning
5
6 Mission one,buid road on Mars,US,US,Michael,0123456789,buid road,buid road ,builder,5,For the mission,concrete,1,01/01/2025,Mars base,2.16,Planning phase
```