# **System Requirements Specification**

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For

# **My Travel Buddy**

Version 1.0

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#### **MY TRAVEL BUDDY**

### System Requirements Specification

You need to consume APIs exposed by Backend application and implement authentication (if required) in ReactJs to make application work as FULLSTACK

### BACKEND-SPRING BOOT RESTFUL APPLICATION

### 1 PROJECT ABSTRACT

"My Travel Buddy" is a full-stack e-commerce application designed to provide a seamless online travel booking experience. It leverages the MERN stack, with MongoDB as the database, Express.js for the backend, ReactJs for the frontend, and Node.js as the runtime environment. This platform aims to connect travelers with the tour guides to provide unimaginable journeys.

#### Following is the requirement specifications:

	My Travel Buddy
Modules	
1	Auth
2	Booking
3	Destination
4	Review
5	Trip plan
6	User
Auth Module	
Functionalities	
1	Login user
2	Change the password

Booking Module	
Functionalities	
1	Get all bookings
2	Create booking
3	Search booking
4	Get upcoming bookings

5	Get booking by id
6	Update booking by id
7	Delete booking by id
Destination	
Module	
Functionalities	
1	Create destination
2	Get all destinations
3	Get top rated destinations
4	Search destination
5	Search destination by budget
6	Get destination details by id
7	Update destination by id

Review Module	
Functionalities	
1	Get all reviews
2	Create a review
3	Search review by destination
4	Search review by rating
5	Get review by id
6	Update review by id
7	Delete review by id

8 Delete destination by id

Trip Plan Module	
Functionalities	
1	Create a trip plan
2	Get popular trip plans
3	Search trip plan
4	Get my trip plans
5	Get all trip plans
6	Get trip plan by id
7	Update trip plan by id
8	Delete trip plan by id

User Module	
Functionalities	
1	Create user
2	Get all upcoming trips for a user
3	Get all past trips for a user
4	Get all trips for a user
5	Get all booking for a user
6	Get all reviews by a user
7	Get user details
8	Updated user details
9	Delete user details

### 2 ASSUMPTIONS, DEPENDENCIES, RISKS / CONSTRAINTS

#### 2.1 AUTH CONSTRAINTS

2.2 When the login api fails, it must return a proper message like "Authentication failed. User not found" or "Authentication failed. Incorrect password".

#### 2.3 BOOKING CONSTRAINTS

- 2.4 When creating a booking, user and destination fields are must to have.
- 2.5 When searching a booking, we must pass status in the query param.
- 2.6 When getting a booking by id, if id is not found it should return Booking not found.
- 2.7 When updating a booking by id, if id is not found it should return Booking not found.
- 2.8 When deleting a booking by id, if id is not found it should return Booking not found.

#### 2.9 Destination Constraints

- 2.10 When creating a destination, the name field is a must to have.
- 2.11 When searching a destination, it is required to pass either name or category.
- 2.12 When searching a destination by budget, min and max values are must to pass.
- 2.13 When getting a destination by id, if id is not found it should return Destination not found.
- 2.14 When updating a destination by id, if id is not found it should return Destination not found.
- 2.15 When deleting a destination by id, if id is not found it should return Destination not found.

#### 2.16REVIEW CONSTRAINTS

- 2.17 When creating a review, user, destination and rating must have fields.
- 2.18 When searching a review by destination, destinationName is a must have field.
- 2.19 When searching review by rating, min and max are must have fields.
- 2.20 When getting a review by id, if id is not found it should return Review not found.
- 2.21 When updating a review by id, if id is not found it should return Review not found.
- 2.22 When deleting a review by id, if id is not found it should return Review not found.

#### 2.23TRIP PLAN CONSTRAINTS

- 2.24 When creating a trip plan, user and destination are must have fields.
- 2.25 When searching a trip plan by destination, destinationName is a must have field.
- 2.26 When getting a trip plan by id, if id is not found it should return Trip plan not found.
- 2.27 When updating a trip plan by id, if id is not found it should return Trip plan not found.
- 2.28 When deleting a trip plan by id, if id is not found it should return Trip plan not found.

#### 2.29USER CONSTRAINTS

- When getting a user by id, if id is not found it should return User not found.
- When updating a user by id, if id is not found it should return User not found.
- When deleting a user by id, if id is not found it should return User not found.

### **Common Constraints**

- All the database operations must be implemented in serviceImpl file only.
- Do not change, add, remove any existing methods in the service file.
- In the service layer, custom methods can be added as per requirements.
- All RestEndpoint methods and Exception Handlers must return data in json format.
- Any type of authentication and authorisation must be added in routes file only.

### 3 REST ENDPOINTS

Rest End-points to be exposed in the routes file and attached with controller method along with method details for the same to be created. Please note, that these all are required to be implemented.

### 3.1 AUTH CONTROLLER

UR	L Exposed	Purpose
1. /api/auth/login		
Http Method POST		Logins the user and returns token
Parameter -		

Return	Token	
2. /api/auth/changePassword		
Http Method POST		
Parameter -		Changes the password for a user
Return	Acknowledgement	
	message	

# 3.2 BOOKING CONTROLLER

Note: All routes must be authenticated.

Note. All Toutes II	nust be authenticated.	
URL	Exposed	Purpose
1. /api/bookings		
Http Method	GET	Fetches all bookings
Parameter	-	
Return	List of bookings	
2. /api/bookings		
Http Method	POST	Creates a new booking
Parameter	-	
Return	Booking	
	•	
3. /api/bookings/se	arch	
Http Method	GET	Searches a booking by status of
Parameter	status or	destination name
	destinationName	
Return	List of bookings	
4. /api/bookings/up	ocoming	
Http Method	GET	Getts list of all upcoming
Parameter	-	bookings
Return	List of bookings	
5. /api/bookings/:b	ookingId	
Http Method	GET	Fetches a booking by its id
Parameter	bookingId	, 5551.55 3. 2551 27, 155 15.
Return	Booking	
6. /api/bookings/:b	ookingId	
Http Method	PUT	Updates a booking by id
Parameter	bookingId	
Return	Booking	

7. /api/bookings/:bookingId			
Http Method DELETE		Deletes a booking by id	
Parameter	bookingId		
Return Booking			

# Destination CONTROLLER

U	RL Exposed	Purpose
1. /api/destination	ons	
Http Method	POST	Creates a new destination
Parameter	-	
Return	Destination	
2. /api/destination	ons	
Http Method	GET	Fetches all destinations
Parameter	-	
Return	List of destinations	11
	•	
3. /api/destination	ons/top-rated	
Http Method	GET	Fetches all top rated destinations
Parameter	-	
Return	List of destinations	
4. /api/destination	ons/search	
Http Method	GET	Searches destinations by name or category
Query param	name	
	category	
Return	List of destinations	
5. /api/destination	ons/search/budget	
Http Method	GET	
Query param	min	     Searches destinations by min and max budge
	max	Scarcines destinations by min and max budge
Return	List of destinations	11
6. /api/destination	ons/:destinationId	
Http Method	GET	Fetches a destination by id
Parameter	destinationId	<u> </u>
Return	Destination	]

7./3	pi/destinations/	:destinationId	
Http M	ethod	PUT	Updates a destination by id

Parameter	destinationId	[isSecured]
Return	Destination	
8. /api/destination	s/:destinationId	
Http Method	DELETE	Deletes a destination by id
Parameter	destinationId	[isSecured]
Return	Destination	[

# **REVIEW CONTROLLER**

Note: Routes which must be authenticated are mentioned with "isSecured" below.

URL Exposed		Purpose	
1. /api/reviews			
Http Method	GET	Fetches all reviews	
Parameter	-		
Return	List of reviews		
2. /api/reviews			
Http Method	POST	Creates a new review	
Parameter	-	[isSecured]	
Return	Review	[	
3. /api/reviews/sear	ch		
Http Method	GET	Searches reviews by destination name	
Query param	destination name	,	
Return	List of reviews		
4. /api/reviews/sear	ch/rating		
Http Method	GET	Searches reviews by min and max rating	
Query param	min		
	max		
Return	List of reviews		
5. /api/reviews/:revi	ewld		
Http Method	DELETE	Deletes a review by id	
Parameter	reviewId	[isSecured]	
Return	Review	[ISSECULEU]	
6. /api/reviews/:revi	ewld		
Http Method	GET	Fetches a review by id	
Parameter	reviewId	. 555.155 5 . 571677 57 14	
Return	Review		

7. /api/reviews:reviewId			
Http Method	PUT		Updates a review
Parameter	reviewId		·
Return	Review		

# TRIP PLAN CONTROLLER

Note: Routes which must be authenticated are mentioned with "isSecured".

URL Exposed		Purpose	
1. /api/trips			
Http Method	POST	Creates a new trip plan	
Parameter	-		
Return	TripPlan		
2. /api/trips/pop	pular		
Http Method	GET	Fetches popular trip plans	
Parameter	-		
Return	List of trip plans		
3. /api/trips/sea	rch		
Http Method	GET	Searches list of trip plans by destination name	
Query param	destination nam	of min and max budget	
	min and max budget		
Return	List of trip plans		
4. /api/trips/me			
Http Method	GET	Gets a trip plan by user	
Parameter	-	[isSecured]	
Return	List of trip plans		
5. /api/trips			
Http Method	DELETE	Gets a trip plans	
Parameter	id	]	
Return	TripPlan		
6. /api/trips/:trip	pPlanId		
Http Method	GET	Fetches a trip plan by id	
Parameter	tripPlanId		
Return	TripPlan		
7. /api/trips/trip	PlanId		
Http Method	PUT	Updates a trip plan by id	
Parameter	tripPlanId	]	
Return	TripPlan	]	

8. /api/trips/:tripPlanId		
Http Method DELETE		Deletes a trip plan by id
Parameter	tripPlanId	
Return	TripPlan	

### USFR CONTROLLER

URL Exposed		Purpose	
1. /api/users			
Http Method	POST	Creates a new user	
Parameter	-		
Return	User		
2. /api/users/up	coming-trips		
Http Method	GET	Fetches upcoming trips booked by passed toke	
Parameter	-	user	
Return	List of trip plans	[isSecured]	
3. /api/users/pa	st-trips		
Http Method	GET	Fetches past trips done by passed token user	
Parameter	-	[isSecured]	
Return	List of trip plans	[issecureu]	
4. /api/users/all-	-trips		
Http Method	GET	Fetches all booking done by passed token use	
Parameter	-	[isSecured]	
Return	List of trip plans	[10000001001]	
5. /api/users/bo	okings		
Http Method	GET	Fetches bookings done by passed token use	
Parameter	-	[isSecured]	
Return	List of bookings	[Isseedi ed]	
6. /api/users/rev	views		
Http Method	GET	Fetches reviews given by passed token user	
Parameter	-	[isSecured]	
Return	List of reviews		

7. /api/users		
Http Method	GET	Fetches a user by passed token

Parameter	-	[isSecured]	
Return	User		
8. /api/users			
Http Method	PUT	Updates a user by passed token	
Parameter	-	[isSecured]	
Return	User	[	

	9. /api/users		
	Http Method	DELETE	Deletes a user by passed token
	Parameter	-	[isSecured]
L	Return	User	[issecureu]

### 4 TEMPLATE CODE STRUCTURE

### 4.1 Auth code structure

### 1) MODULES/AUTH: controller

**Resources** 

AuthController	This is the controller class for	To be
(Class)	the auth module.	implemented

# 2) MODULES/AUTH: middleware

Resources

File	Description	Status
authGurad		
(function)	Authentication guard	To be implemented

# 3) MODULES/AUTH: routes

File	Description	Status
Auth routes	Routes for auth	Partially implemented.

# 4.1 Booking code structure

# 1) MODULES/BOOKING: controller

**Resources** 

BookingController	This is the controller class for	To be
(Class)	the booking module.	implemented

# 2) MODULES/BOOKING: dao

#### Resources

File	Description	Status
models/booking model	Models for booking	Already implemented
schemas/booking schema	Schemas for booking	Already implemented

### 3) MODULES/BOOKING: routes

#### Resources

File	Description	Status
Booking routes	Routes for booking	Partially implemented.

### 4) MODULES/BOOKING: service

Class	Description	Status
BookingService	Defines BookingService	Already implemented.

# 5) MODULES/BOOKING: service/impl

#### **Resources**

Class	Description	Status
BookingServiceImpl	<ul> <li>Implements BookingService.</li> </ul>	To be implemented.

### 4.1 Destination code structure

# 1) MODULES/DESTINATION: controller

Resources

DestinationController	This is the controller class for	To be
(Class)	the destination module.	implemented

### 2) MODULES/DESTINATION: dao

#### Resources

File	Description	Status
models/destination model	Models for destination	Already implemented
schemas/destination schema	Schemas for destination	Already implemented

### 3) MODULES/DESTINATION: routes

File	Description	Status
Destination routes	Routes for destination	Partially implemented.

### 4) MODULES/DESTINATION: service

#### **Resources**

Class	Description	Status
DestinationService	Defines DestinationService	Already implemented.

### 5) MODULES/DESTINATION: service/impl

#### Resources

Class	Description	Status
DestinationServiceImpl	<ul> <li>Implements</li> <li>DestinationService.</li> </ul>	To be implemented.

### 4.1 Review code structure

### 1) MODULES/REVIEW: controller

#### Resources

ReviewController	This is the controller class for	To be
(Class)	the review module.	implemented

### 2) MODULES/REVIEW: dao

File	Description	Status
models/review model	Models for review	Already implemented
schemas/review schema	Schemas for review	Already implemented

### 3) MODULES/REVIEW: routes

#### Resources

File	Description	Status
Review routes	Routes for review	Partially implemented.

### 4) MODULES/REVIEW: service

#### **Resources**

Class	Description	Status
ReviewService	Defines ReviewService	Already implemented.

# 5) MODULES/REVIEW: service/impl

#### Resources

Class	Description	Status
ReviewServiceImpl	Implements ReviewService.	To be implemented.

# TripPlan code structure

### 1) MODULES/TRIPPLAN: controller

#### **Resources**

TripPlanController	This is the controller class for	To be
(Class)	the trip plan module.	implemented

### 2) MODULES/TRIPPLAN: dao

File	Description	Status
models/trip plan model	Models for trip plan	Already implemented

schemas/trip plan schema		
	Schemas for trip plan	Already implemented

### 3) MODULES/TRIPPLAN: routes

#### **Resources**

File	Description	Status
TripPlan routes	Routes for trip plan	Partially implemented.

### 4) MODULES/TRIPPLAN: service

#### Resources

Class	Description	Status
TripPlanService	Defines TripPlanService	Already implemented.

### 5) MODULES/TRIPPLAN: service/impl

#### Resources

Class	Description	Status
TripPlanServiceImpl	<ul> <li>Implements TripPlanService.</li> </ul>	To be implemented.

# User code structure

### 1) MODULES/USER: controller

UserController	This is the controller class for	To be
(Class)	the user module.	implemented

# 2) MODULES/USER: dao

#### **Resources**

File	Description	Status
models/user model	Models for user	Already implemented
schemas/user schema	Schemas for user	Already implemented

### 3) MODULES/USER: routes

#### **Resources**

File	Description	Status
User routes	Routes for user	Partially implemented.

### 4) MODULES/USER: service

#### **Resources**

Class	Description	Status
UserService	Defines UserService	Already implemented.

# 5) MODULES/USER: service/impl

Class	Description	Status
UserServiceImpl	<ul> <li>Implements UserService.</li> </ul>	To be implemented.

### FRONTEND-REACTJS SPA

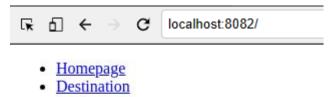
### 1 PROBLEM STATEMENT

"My Travel Buddy" is a SPA in ReactJs with full-stack e-commerce application designed to provide a seamless online travel booking experience

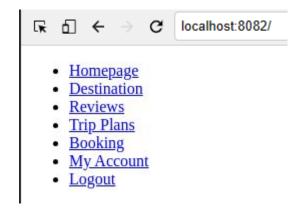
### 2 PROPOSED MY TRAVEL BUDDY

UI needs improvisation and modification as per given use case and to make test cases passed.

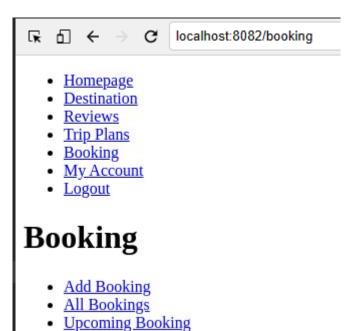
### Home page

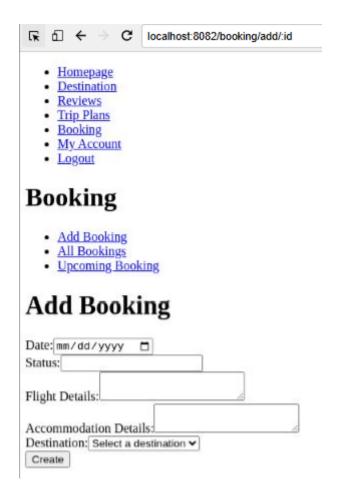


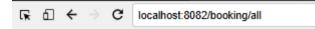
- <u>Reviews</u>Trip Plans
- Login



### **Booking page**







- Homepage
- Destination
- Reviews

- Trip Plans
   Booking
   My Account
- Logout

# **Booking**

- Add Booking
- All Bookings
- Upcoming Booking

# **Bookings**

### Search Bookings

Destination Name:	
Status:	
Search	

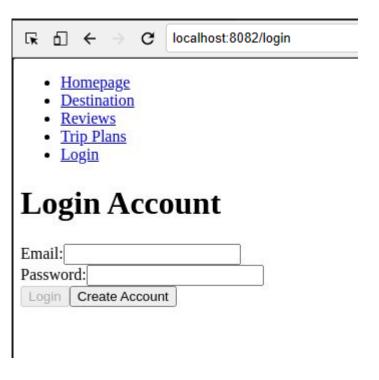
No bookings available.

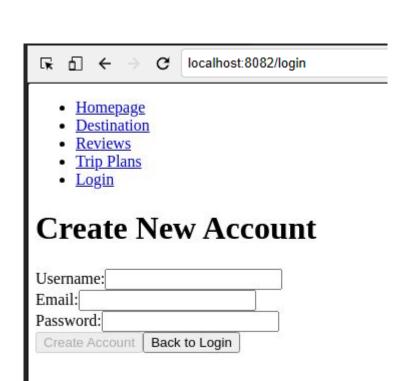
### **Destination Page**

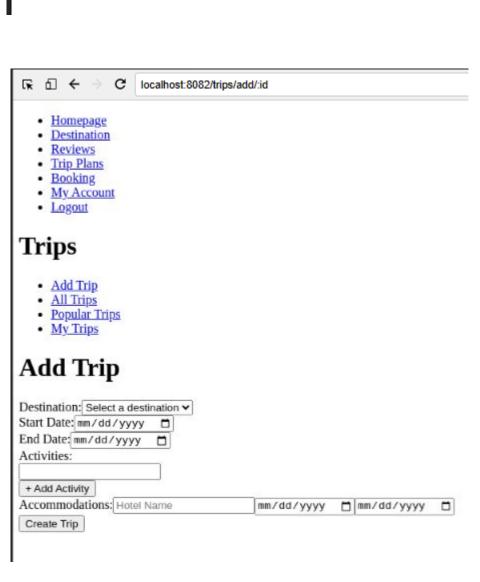


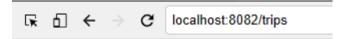
ଢ଼େ ଘ ← → ୯ localhost:8082/destination/all
<ul> <li>Homepage</li> <li>Destination</li> <li>Reviews</li> <li>Trip Plans</li> <li>Booking</li> <li>My Account</li> <li>Logout</li> </ul>
Destination
<ul> <li>Add Destination</li> <li>All Destinations</li> <li>TopRated Destinations</li> </ul>
All Destinations
Search Destination
Name:
Category:
Min Budget:
Max Budget:
Search
No Destination

# **Login Page**









- Homepage
- Destination
- Reviews
- Trip Plans
- Booking
- My Account
- <u>Logout</u>

# Trips

- Add Trip
- All Trips
- Popular Trips
- My Trips



- Homepage
- Destination
- Reviews
- Trip Plans
- Booking
- My Account
- Logout

# **Trips**

- Add Trip
- All Trips
- Popular Trips
- My Trips

# All Trips

No trips available.

G f	→		G	localhost:8	082/us	er	
• <u> </u> • <u> </u> • <u> </u>	Home Destir Revie Trip P Booki My A Logor	nation ws clans ng ccou	<u>n</u>				
Use	r l	De	tai	ls			
<b>Use</b>			tai	ls			
	me:[ι	ıser		ls			
Userna	me: u	ıser @mai					
Userna Email:	me: user@	ıser @mai	il.com				
Userna Email: Passwo	me: user@ord: ••	ıser @mai	il.com		<u> </u>		
Userna Email: Passwo	me: user@ ord: •• Trips Booki	iser @mai ngs	il.com		<u> </u>		
Userna Email: Passwo Show	me: user@ ord: •• Trips Booki Revie	mai mai ngs	il.com				

Other pages i.e Review, Trip Plan and User are similar like above one.

### 3 BUSINESS-REQUIREMENT:

As an application developer, develop the E-Mall ProConnect (Single Page App) with below guidelines:

User	User Story Name	User Story
Story #		
US_01	Home Page	As a user I should be able to visit the Home page as the default page and below links are accessible to me:  1. Homepage 2. Destination 3. Reviews 4. Trip Plans 5. Login 6. Booking (only when logged in)

		7. My Account (only when logged in) 8. Logout (only when logged in)
US_02	Login Page	As a user I should be able to visit the Login page once I click on the Login button. And there should be a create account button, on clicking it, I should be able to see the form to create a new account.
US_03	Destination Page	As a user I should be able to see the destination page (when clicked on homepage anchor tag) and perform all operations:  Acceptance criteria:  1. Be able to see the Add Destination link and on clicking, it must open the appropriate page also.  2. Be able to see the All Destinations link and on clicking, it must open the appropriate page also.  3. Be able see TopRated Destinations link and on clicking, it must open the appropriate page also
US_04	Review Page	As a user I should be able to see the review page as:  Acceptance criteria:  1. Have All Reviews link when and on clicking, it must open the appropriate page also

US_05	Trips Page	As a user I should be able to see the trips page as:	
		Acceptance criteria:	
		Be able see Add Trip link and on clicking, it must open the appropriate page also	
		<ol><li>Be able see All Trips link and on clicking, it must open the appropriate page also</li></ol>	
		4. Be able see Popular Trips link and on clicking, it must open the appropriate page also	
		5. Be able see My Trips link and on clicking, it must open the appropriate page also	

US_06	Booking Page	As a user I should be able to see the booking page as:
		Acceptance criteria:
		<ol><li>Be able see Add Booking link and on clicking, it must open the appropriate page also</li></ol>
		7. Be able see All Booking link and on clicking, it must open the appropriate page also
		8. Be able see Upcoming Booking link and on clicking, it must open the appropriate page also

US_07	My Account Page	As a user I should be able to see the booking page as:
		Acceptance criteria:
		<ol> <li>Be able see Add Booking link and on clicking, it must open the appropriate page also</li> <li>Be able see All Booking link and on clicking, it must open the appropriate page also</li> <li>Be able see Upcoming Booking link and on clicking, it must open the appropriate page also</li> </ol>

### EXECUTION STEPS TO FOLLOW FOR BACKEND

- 1. All actions like build, compile, running application, running test cases will be through Command Terminal.
- To open the command terminal the test takers, need to go to
   Application menu (Three horizontal lines at left top) -> Terminal ->New Terminal.
- 3. This editor Auto Saves the code.
- 4. If you want to exit(logout) and continue the coding later anytime (using Save & Exit option on Assessment Landing Page) then you need to use CTRL+Shift+B-command compulsorily on code IDE. This will push or save the updated contents in the internal git/repository. Else the code will not be available in the next login.
- 5. These are time bound assessments the timer would stop if you logout and while logging in back using the same credentials the timer would resume from the same time it was stopped from the previous logout.
- 6. To test any Restful application, the last option on the left panel of IDE, you can find ThunderClient, which is the lightweight equivalent of POSTMAN.
- 7. You can follow series of command to setup express environment once you are in your project-name folder:
  - a. npm install -> Will install all dependencies -> takes 10 to 15 min
  - b. npm run start -> To compile and run the project.
  - c. npm run jest -> to run all test cases and see the summary of all passed and failed test cases.
  - d. npm run test -> to run all test cases and register the result of all test cases. It is mandatory to run this command before submission of workspace -> takes 5 to 6 min
- 8. You need to use CTRL+Shift+B command compulsorily on code IDE, before final submission as well. This will push or save the updated contents in the internal git/repository, and will be used to evaluate the code quality.

### **EXECUTION STEPS TO FOLLOW FOR FRONTEND**

- 1. All actions like build, compile, running application, running test cases will be through Command Terminal.
- To open the command terminal the test takers, need to go to
   Application menu (Three horizontal lines at left top) -> Terminal ->New Terminal.
- 3. This is a web-based application, to run the application on a browser, use the internal browser in the environment.
- 4. You can follow series of command to setup ReactJs environment once you are in your project-name folder:
  - a. npm install -> Will install all dependencies -> takes 10 to 15 min
  - b. npm run start -> To compile and deploy the project in browser. You can press
     <Ctrl> key while clicking on localhost:8082 to open project in browser -> takes 2 to
     3 min
  - c. npm run jest -> To run all test cases and check the summary.
  - d. npm run test -> to run all test cases. It is mandatory to run this command before submission of workspace -> takes 5 to 6 min
- 5. You need to use CTRL+Shift+B command compulsorily on code IDE, before final submission as well. This will push or save the updated contents in the internal git/repository, and will be used to evaluate the code quality.