

EduBridge



A Project

Report On

Metro Rails Management System

By

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EDUBRIDGE

(School of coding)

Introduction:

This is an integrated service which provide all information about the metro rail and it's routes for public. The proposed system is a web based application which provides information regarding timings, routes, fair. This system manages public feedback about services through it's complaint management system. This system also contains an online ticket recharge module where users can recharge their smart cards online through the site.

There is also an admin module where admin can add stations, trains, routes and also update the fairs. The admin is a panel consisting of a group authorized persons.

Objective:

The objectives of the project are as follows:

- Users can register complaints through the site.
- User login page where users can recharge tickets online.
- User can view metro timetable.
- User can also view the fair details and the route map.
- An admin login page where admin can add stations, trains, routes, update fairs and even add a new admin.

Software Requirements:

- Front end: Java/J2EE technologies (Servlet, JSP), HTML, CSS, Bootstrap
- Back end: MySQL.
- Server: Apache Tomcat 8.5V
- IDE: Eclipse IDE for Java EE Developers
- Browser: Google Chrome
- Operating System: Windows 10

DataBase:

create database metrorail;

Use metrorail;

Admin:

```
CREATE TABLE `admin` (  
  `id` int NOT NULL AUTO_INCREMENT,  
  `a_name` varchar(30) NOT NULL,  
  `a_address` varchar(75) NOT NULL,  
  `phone_num` varchar(13) NOT NULL,  
  `email` varchar(30) NOT NULL,
```

`age` int NOT NULL,

`gender` varchar(6) NOT NULL,

`permission` int NOT NULL,

`designation` varchar(25) NOT NULL,

`password` varchar(30) NOT NULL,

PRIMARY KEY (`id`)

) ENGINE=InnoDB AUTO_INCREMENT=9 DEFAULT CHARSET=latin1;

Card recharges:

CREATE TABLE `card_recharges` (

`id` int NOT NULL AUTO_INCREMENT,

`card_num` varchar(10) NOT NULL,

`status` varchar(20) NOT NULL,

`amount` varchar(10) NOT NULL,

`datetime` datetime NOT NULL DEFAULT CURRENT_TIMESTAMP,

`txn_id` varchar(255) NOT NULL,

`paymentid` text,

PRIMARY KEY (`id`)

) ENGINE=InnoDB AUTO_INCREMENT=7 DEFAULT CHARSET=latin1;

Complaints:

```
CREATE TABLE `complaints` (  
  
  `id` int NOT NULL AUTO_INCREMENT,  
  
  `u_name` varchar(30) NOT NULL,  
  
  `u_address` text NOT NULL,  
  
  `phone_num` varchar(13) NOT NULL,  
  
  `msg` text NOT NULL,  
  
  `email` varchar(50) NOT NULL,  
  
  `age` int NOT NULL,  
  
  `status` tinyint(1) NOT NULL,  
  
  `datetime` datetime NOT NULL DEFAULT CURRENT_TIMESTAMP,  
  
  PRIMARY KEY (`id`)  
  
) ENGINE=InnoDB AUTO_INCREMENT=8 DEFAULT CHARSET=latin1;
```

demo :

```
CREATE TABLE `demo` (  
  
  `id` int NOT NULL,  
  
  `name` varchar(255) DEFAULT NULL,  
  
  PRIMARY KEY (`id`)  
  
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

Fair:

```
CREATE TABLE `fair` (  
  
  `id` int NOT NULL AUTO_INCREMENT,  
  
  `amt` varchar(10) NOT NULL,  
  
  `min_distances` varchar(10) NOT NULL,  
  
  `max_distances` varchar(10) NOT NULL,  
  
  PRIMARY KEY (`id`)  
  
) ENGINE=InnoDB AUTO_INCREMENT=9 DEFAULT CHARSET=latin1;
```

metro_card :

```
CREATE TABLE `metro_card` (  
  
  `id` int NOT NULL AUTO_INCREMENT,  
  
  `card_num` varchar(20) DEFAULT NULL,  
  
  `u_name` varchar(30) NOT NULL,  
  
  `u_address` text NOT NULL,  
  
  `age` int NOT NULL,  
  
  `gender` varchar(6) NOT NULL,  
  
  `phone_num` varchar(13) NOT NULL,  
  
  `email` varchar(50) NOT NULL,  
  
  `password` varchar(20) NOT NULL,  
  
  `card_status` tinyint(1) NOT NULL DEFAULT '0',  
  
  `balance` float DEFAULT NULL,  
  
  PRIMARY KEY (`id`)  
  
) ENGINE=InnoDB AUTO_INCREMENT=3 DEFAULT CHARSET=latin1;
```

Reply:

```
CREATE TABLE `reply` (  
  
  `id` int NOT NULL AUTO_INCREMENT,  
  
  `complaints_id` int NOT NULL,  
  
  `msg` text NOT NULL,  
  
  `admin_id` int NOT NULL,  
  
  PRIMARY KEY (`id`)  
  
) ENGINE=InnoDB AUTO_INCREMENT=7 DEFAULT CHARSET=latin1;
```

Route:

```
CREATE TABLE `route` (  
  
  `id` int NOT NULL AUTO_INCREMENT,  
  
  `r_name` varchar(50) NOT NULL,  
  
  PRIMARY KEY (`id`)  
  
) ENGINE=InnoDB AUTO_INCREMENT=3 DEFAULT CHARSET=latin1;
```


Route details:

```
CREATE TABLE `route_details` (  
  
  `id` int NOT NULL AUTO_INCREMENT,  
  
  `route_id` int NOT NULL,  
  
  `station_id` int NOT NULL,  
  
  `s_order_num` int NOT NULL,  
  
  `length_from_start` float NOT NULL,  
  
  PRIMARY KEY (`id`)  
  
) ENGINE=InnoDB AUTO_INCREMENT=33 DEFAULT CHARSET=latin1;
```

Station:

```
CREATE TABLE `station` (  
  
  `id` int NOT NULL AUTO_INCREMENT,  
  
  `s_name` varchar(50) NOT NULL,  
  
  `latitude` float NOT NULL,  
  
  `longitude` float NOT NULL,  
  
  PRIMARY KEY (`id`)  
  
) ENGINE=InnoDB AUTO_INCREMENT=16 DEFAULT CHARSET=latin1;
```

Trains:

```
CREATE TABLE `trains` (  
  
  `id` int NOT NULL AUTO_INCREMENT,  
  
  `train_no` varchar(20) NOT NULL,  
  
  `capacity` int NOT NULL,  
  
  PRIMARY KEY (`id`)  
  
) ENGINE=InnoDB AUTO_INCREMENT=7 DEFAULT CHARSET=latin1;
```

Trip:

```
CREATE TABLE `trip` (  
  
  `id` int NOT NULL AUTO_INCREMENT,  
  
  `trip_code` varchar(20) NOT NULL,  
  
  `train_id` int NOT NULL,  
  
  `route_id` int NOT NULL,  
  
  PRIMARY KEY (`id`)  
  
) ENGINE=InnoDB AUTO_INCREMENT=5 DEFAULT CHARSET=latin1;
```

Trip details:

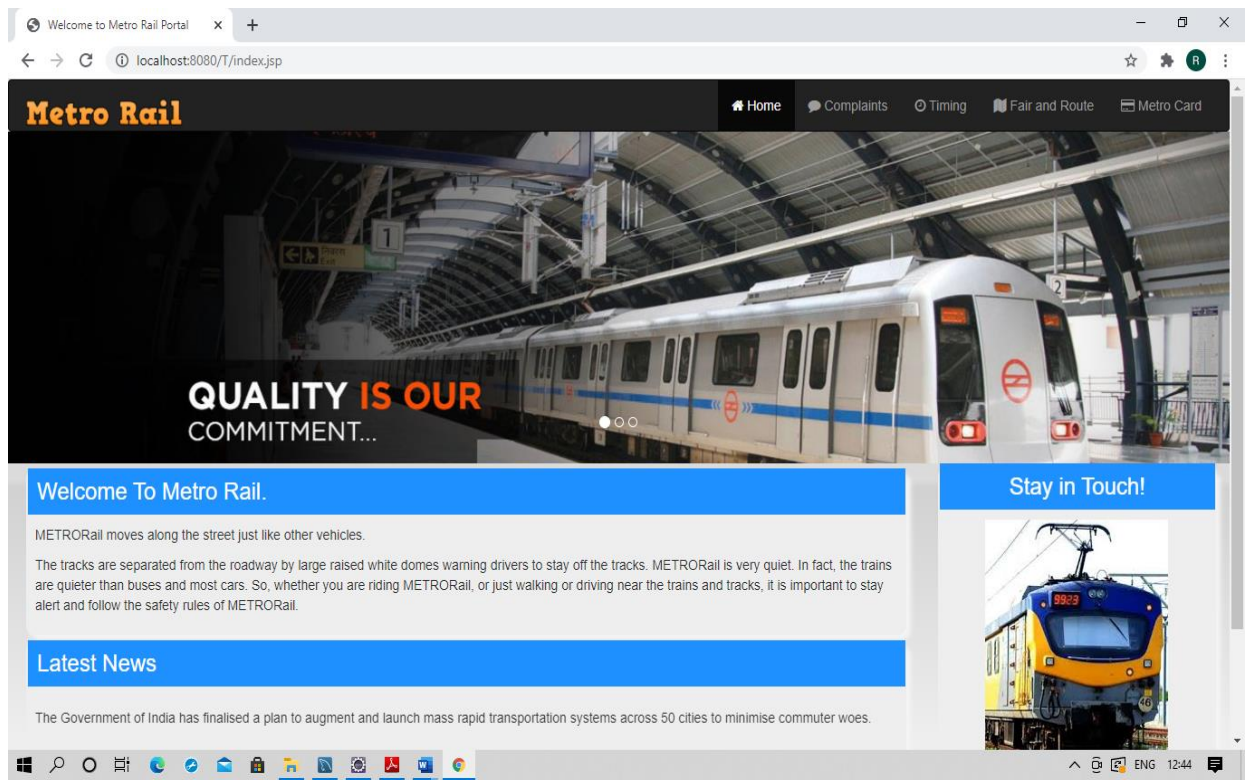
```
CREATE TABLE `trip_details` (  
  
  `id` int NOT NULL AUTO_INCREMENT,  
  
  `trip_num` int NOT NULL,  
  
  `station_id` int NOT NULL,  
  
  `arrival_time` varchar(10) NOT NULL,  
  
  `departure_time` varchar(10) NOT NULL,  
  
  PRIMARY KEY (`id`)  
  
) ENGINE=InnoDB AUTO_INCREMENT=11 DEFAULT CHARSET=latin1;
```

❖ Modules and Description of Metro Rails

Management System:

- Home
- Complaints
- Timings
- Ticket and Route
- Metro Card

➤ Home:



➤ Complaints:

Complaint System

localhost:8080/T/complaint.jsp

Metro Rail Home Complaints Timing Fair and Route Metro Card

QUALITY IS OUR COMMITMENT...


Please fill this form to Submit your Complaint

Name

Email

Age

Stay in Touch!



➤ Timings:

Metro Timing

localhost:8080/T/timing.jsp

Metro Rail Home Complaints Timing Fair and Route Metro Card


QUALITY IS OUR COMMITMENT...

Time Table For Journey

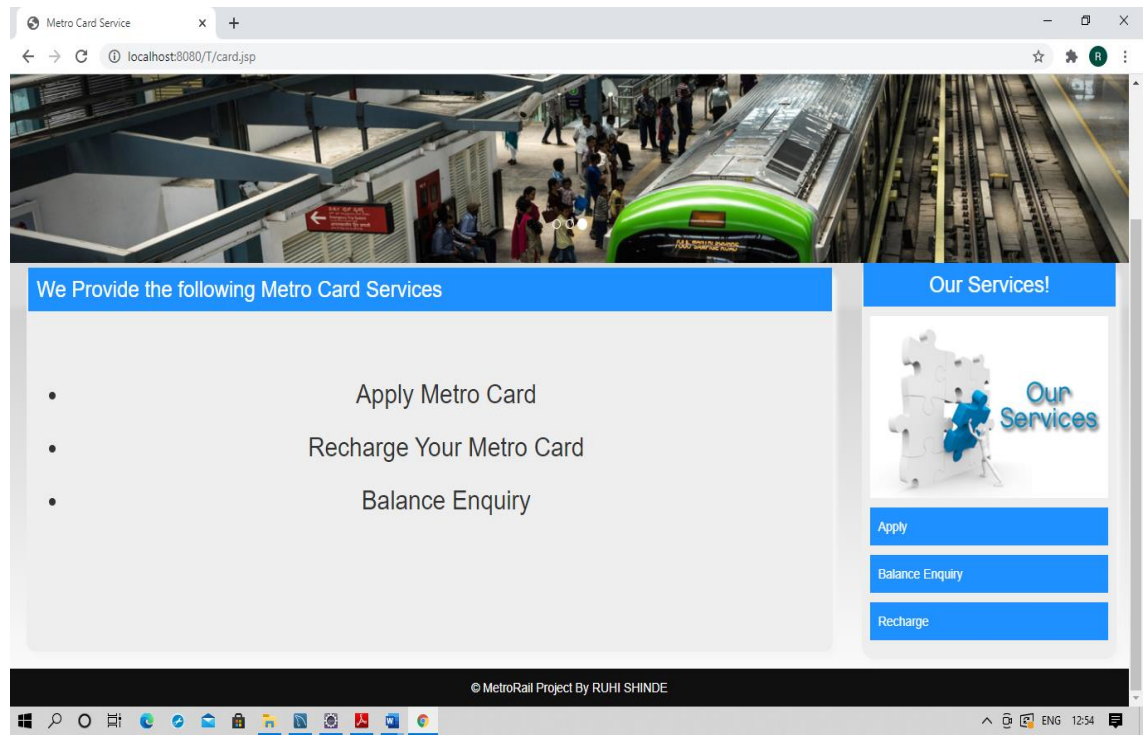
Source Station :

Destination Station :

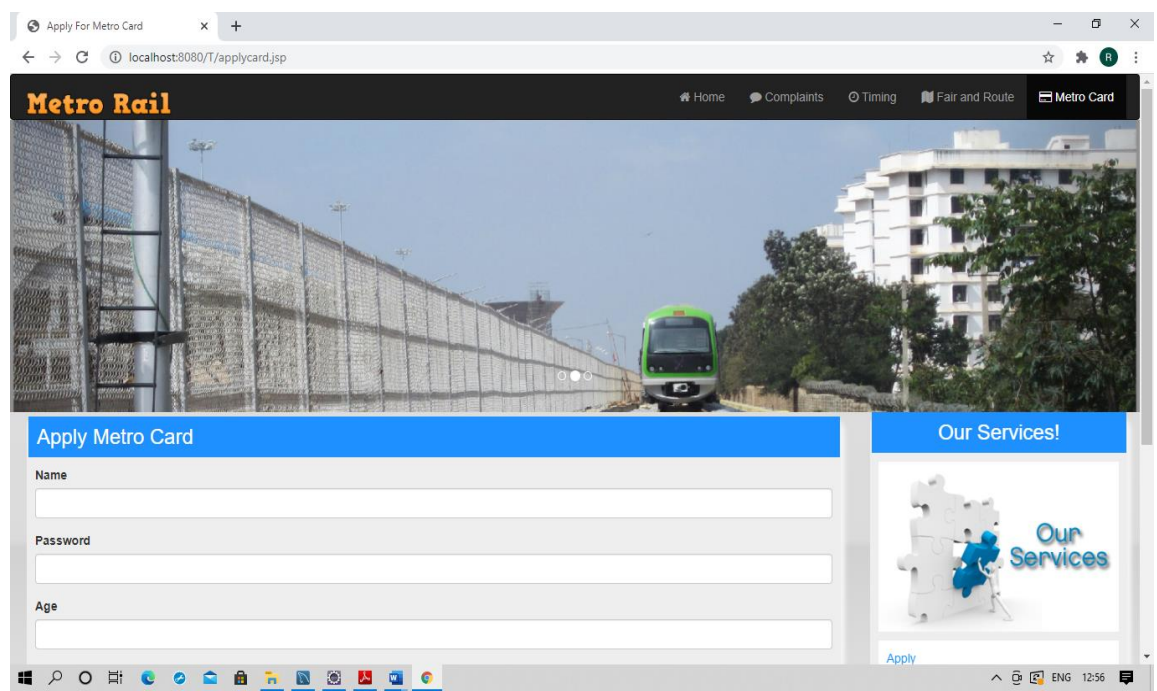
Stay in Touch!



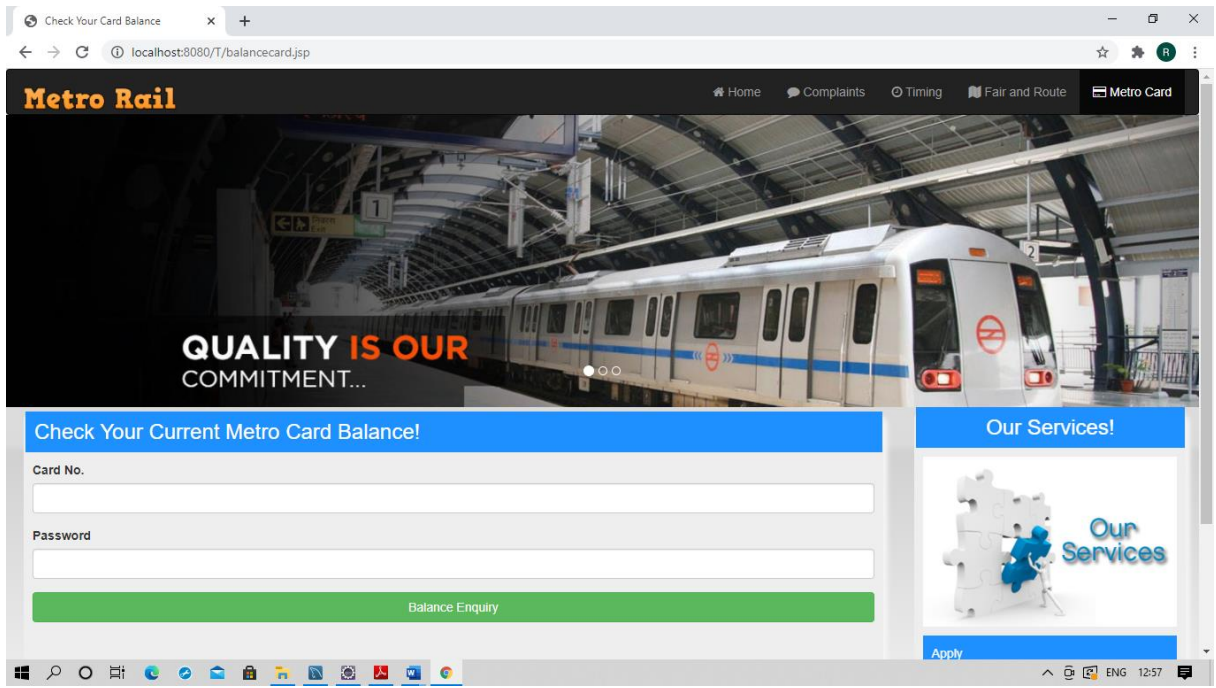
- **Metro Card:**



- **Apply Card:**



- Balance Enquiry:

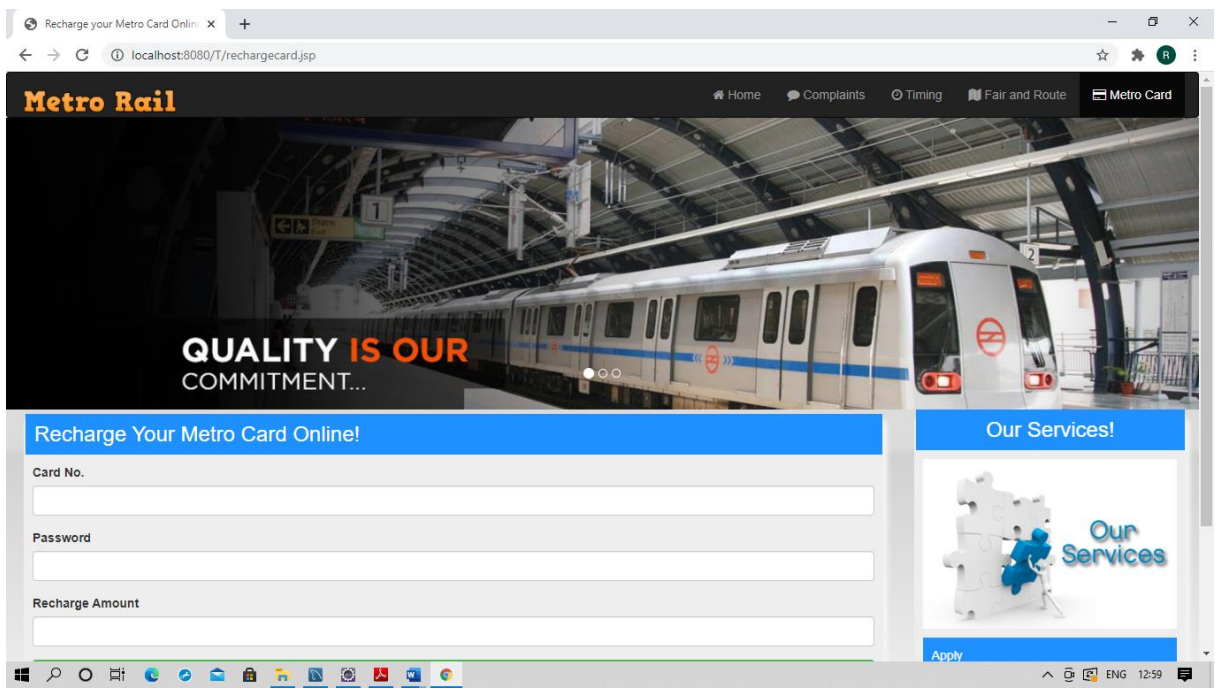


The screenshot shows a web browser window with the address bar displaying 'localhost:8080/T/balancecard.jsp'. The website header features the 'Metro Rail' logo and navigation links: Home, Complaints, Timing, Fair and Route, and Metro Card. The main banner image shows a train at a station with the text 'QUALITY IS OUR COMMITMENT...'. Below the banner, there are two main sections:

- Check Your Current Metro Card Balance!**: This section contains a form with two input fields labeled 'Card No.' and 'Password', followed by a green button labeled 'Balance Enquiry'.
- Our Services!**: This section features a graphic of puzzle pieces with the text 'Our Services' and an 'Apply' button at the bottom.

The browser's taskbar at the bottom shows various application icons and the system clock indicating 12:57.

- Recharge Metro Card:

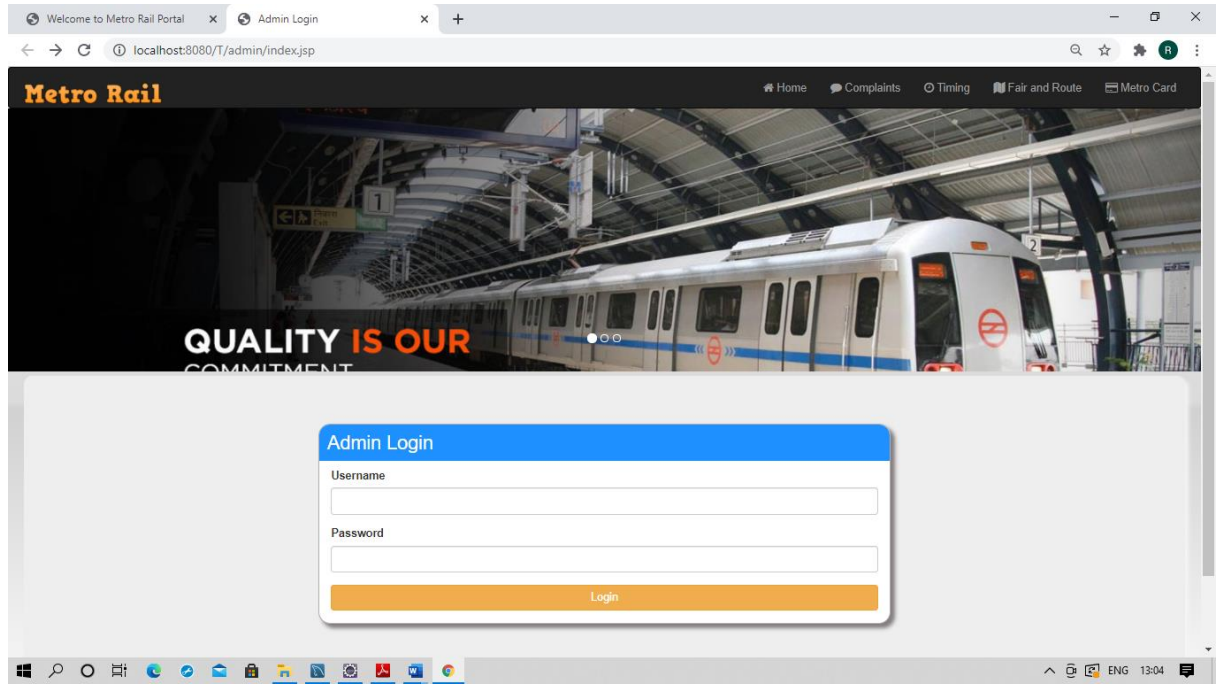


The screenshot shows a web browser window with the address bar displaying 'localhost:8080/T/rechargecard.jsp'. The website header is identical to the previous screenshot, featuring the 'Metro Rail' logo and navigation links. The main banner image and text are also the same. Below the banner, there are two main sections:

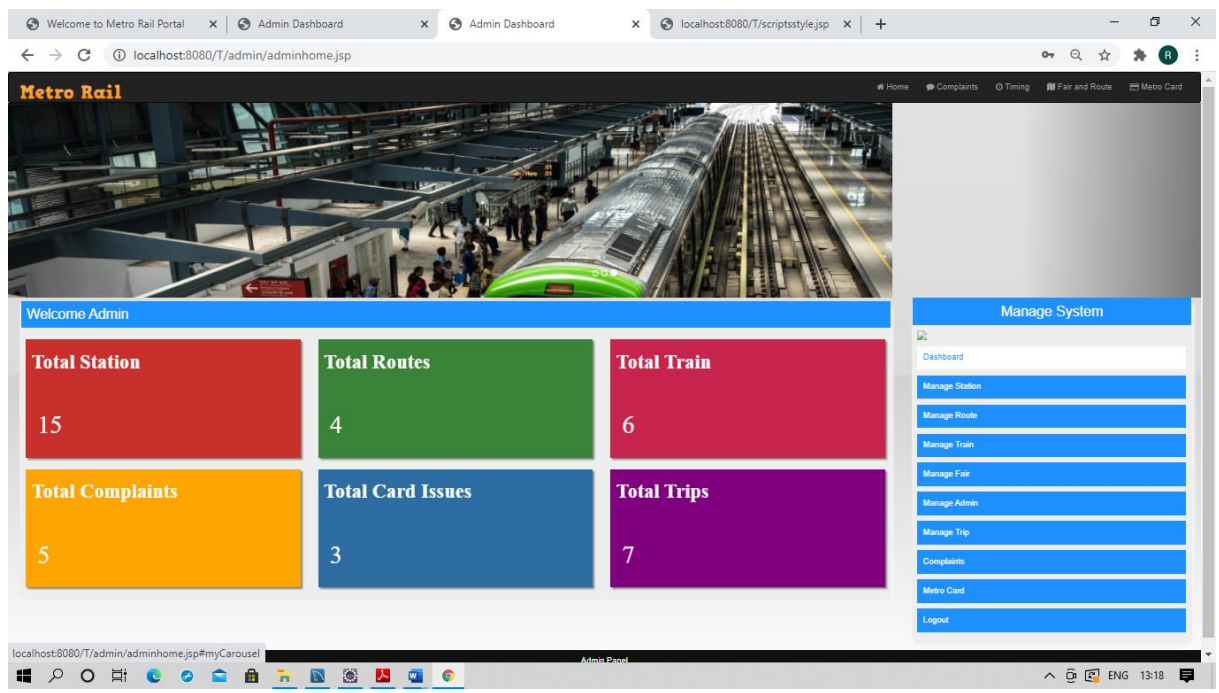
- Recharge Your Metro Card Online!**: This section contains a form with three input fields labeled 'Card No.', 'Password', and 'Recharge Amount', followed by a green button labeled 'Recharge'.
- Our Services!**: This section is identical to the one in the previous screenshot, featuring a graphic of puzzle pieces with the text 'Our Services' and an 'Apply' button at the bottom.

The browser's taskbar at the bottom shows various application icons and the system clock indicating 12:59.

➤ Admin/ index:



➤ Admin/home:



➤ Admin/Manage station:

The screenshot shows the 'Admin Dashboard' for 'Station Management'. The page has a header with navigation links: 'Welcome to Metro Rail Portal', 'Admin Dashboard', 'Station', and a local host address. The main content area is divided into two columns. The left column contains an 'Add Station' form with fields for 'Station Name', 'Latitude', and 'Longitude', and a green 'Add Station' button. Below the form is a 'List Of Stations' table with columns: Station Id, Station Name, Latitude, Longitude, and Action. The table lists two stations: Thane (Station Id 1, Latitude 23.7957, Longitude 86.4305) and Borivali (Station Id 3, Latitude 23.7465, Longitude 86.784). Each row has an 'Edit' button. The right column contains a 'Manage System' sidebar with links: Dashboard, Manage Station, Manage Route, Manage Train, Manage Fair, Manage Admin, Manage Trip, and Complaints. The top of the page features a banner image of a green metro train on a track.

Station Id	Station Name	Latitude	Longitude	Action
1	Thane	23.7957	86.4305	Edit
3	Borivali	23.7465	86.784	Edit

➤ Admin/Manage route:

The screenshot shows the 'Admin Dashboard' for 'Route Management'. The page has a header with navigation links: 'Welcome to Metro Rail Portal', 'Admin Dashboard', 'Route', and a local host address. The main content area is divided into two columns. The left column contains an 'Add Route' form with fields for 'Route Name', 'Station' (a dropdown menu with 'Thane' selected), 'Position', 'Distance', and an 'Action' column with a 'Delete' button. Below the form are two green buttons: 'Add Station' and 'Add Route'. Below the form is a 'List Of All Routes' table with columns: Route Id, Route Name, No. of Station, and Action. The table is currently empty. The right column contains a 'Manage System' sidebar with links: Dashboard, Manage Station, Manage Route, Manage Train, Manage Fair, Manage Admin, and Complaints. The top of the page features a banner image of a green metro train on a track.

Route Id	Route Name	No. of Station	Action
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➤ Admin/edit route:

Welcome to Metro Rail Portal | Admin Dashboard | Edit Routes | localhost:8080/T/scriptsstyle.jsp

localhost:8080/T/admin/editroutes.jsp?id=1

Metro Rail

Home | Complaints | Timing | Fair and Route | Metro Card

Add Route

Route Name :

Station	Position	Distance	Action
Mannadi	1	0.0	Delete
Borivali	2	5.0	Delete
Churchgate	3	4.0	Delete
Virar	4	15.0	Delete

Manage System

- Dashboard
- Manage Station
- Manage Route
- Manage Train
- Manage Fair
- Manage Admin

➤ Admin/Manage Train:

Welcome to Metro Rail Portal | Admin Dashboard | Connection with mysql database | localhost:8080/T/scriptsstyle.jsp

localhost:8080/T/admin/train.jsp

Metro Rail

Home | Complaints | Timing | Fair and Route | Metro Card

Add Train

Train No. :

Capacity :

Add Train

List Of Trains

Train Id	Train No.	Capacity	Action
1	abc123	100	Edit

Manage System

- Dashboard
- Manage Station
- Manage Route
- Manage Train
- Manage Fair
- Manage Admin

➤ Admin/Manage Fair:

The screenshot shows a web browser window with the URL `localhost:8080/T/admin/fair.jsp`. The page features a header with the 'Metro Rail' logo and navigation links: Home, Complaints, Timing, Fair and Route, and Metro Card. Below the header is a large banner image of a train. The main content area is divided into two sections: 'Add Fair' and 'List Of All Fairs'. The 'Add Fair' section contains a form with the following fields: 'Charges' (with a 'Charge Unit' dropdown), 'Minimum Distance' (with a 'Minimum Distance' dropdown), and 'Maximum Distance' (with a 'Maximum Distance' dropdown). A green 'Add Fair' button is at the bottom of the form. The 'List Of All Fairs' section is currently empty. On the right side, there is a 'Manage System' sidebar with a list of links: Dashboard, Manage Station, Manage Route, Manage Train, Manage Fair, and Manage Admin. The Windows taskbar at the bottom shows the system time as 13:32.

Metro Rail

Home Complaints Timing Fair and Route Metro Card

Add Fair

Charges :

Minimum Distance :

Maximum Distance :

List Of All Fairs

Fair Id	Charges	Minimum Distance	Maximum Distance	Action
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Manage System

- Dashboard
- Manage Station
- Manage Route
- Manage Train
- Manage Fair
- Manage Admin

➤ Admin/Manage admin:

The screenshot shows a web browser window with the URL `localhost:8080/T/admin/admin.jsp`. The page features a header with the 'Metro Rail' logo and navigation links: Home, Complaints, Timing, Fair and Route, and Metro Card. Below the header is a large banner image of a train. The main content area is divided into two sections: 'Add Admin' and 'List Of All Admins'. The 'Add Admin' section contains a form with the following fields: 'Name' (with a 'Name' dropdown), 'Address' (with an 'Address' dropdown), 'Phone' (with a 'Phone' dropdown), 'Email' (with an 'Email' dropdown), 'Age' (with an 'Age' dropdown), 'Gender' (with a 'Male' dropdown), 'Designation' (with a 'Designation' dropdown), and 'Password' (with a 'password' dropdown). A green 'Add Admin' button is at the bottom of the form. The 'List Of All Admins' section is currently empty. On the right side, there is a 'Manage System' sidebar with a list of links: Dashboard, Manage Station, Manage Route, Manage Train, Manage Fair, Manage Admin, Manage Trip, Complaints, and Metro Card. The Windows taskbar at the bottom shows the system time as 13:33.

Metro Rail

Home Complaints Timing Fair and Route Metro Card

Add Admin

Name :

Address :

Phone :

Email :

Age :

Gender :

Designation :

Password :

Manage System

- Dashboard
- Manage Station
- Manage Route
- Manage Train
- Manage Fair
- Manage Admin
- Manage Trip
- Complaints
- Metro Card

➤ Admin/Manage trip:

The screenshot displays the 'Metro Rail' Admin Dashboard. The top navigation bar includes links for Home, Complaints, Timing, Fair and Route, and Metro Card. The main header features the 'Metro Rail' logo and the slogan 'QUALITY IS OUR COMMITMENT' over a background image of a train. The 'Manage Trip' section is active, showing a form to add or manage trips. The form includes fields for Trip Code, Select Route (set to 'first'), and Select Train (set to 'abc123'). Below these is a table with columns for Station, Arrival, Departure, and Action. The 'Station' column has a dropdown menu currently showing 'Thane'. The 'Arrival' and 'Departure' columns have time selection icons. The 'Action' column has a 'Delete' button. At the bottom of the form are two green buttons: 'Add Station' and 'Add Trip'. On the right side, a 'Manage System' sidebar lists various management options: Dashboard, Manage Station, Manage Route, Manage Train, Manage Fair, and Manage Admin. The browser's address bar shows 'localhost:8080/T/admin/trip.jsp'.

Metro Rail

Home Complaints Timing Fair and Route Metro Card

QUALITY IS OUR COMMITMENT

Add Trip

Trip Code :

Select Route :

Select Train :

Station	Arrival	Departure	Action
<input type="text" value="Thane"/>	<input type="text" value="--:--"/>	<input type="text" value="--:--"/>	<input type="button" value="Delete"/>

Manage System

- Dashboard
- Manage Station
- Manage Route
- Manage Train
- Manage Fair
- Manage Admin

- Logout:

