# Full Stack Java Developer Capstone
# MyMovie Plan


## Software Development
## Phase 5 - Testing In a Dev-Ops Lifecycle

Developed by Boigantso Mabena

## Sprint Planning:

## 1st Sprint:

• Creating the flow of the application.
• Initialising the git repository to track changes as development progresses.
• Creating a Spring boot application to fulfil user requirements.
• Configure the Database to maintain the data used for the application.
• Adding the Required dependencies used for the application.

## 2nd Sprint:

• Implemented the Model Layer and Service Layer for the project.
• Implemented the Business Logic part.
• Creating API methods to fetch the response.
• Configure the API to check the Response of the requested object. • Testing in the Postman Tool to check whether the API methods are working or not by Response.

## 3rd Sprint:

• Creating an Angular application to fulfil user requirements.
• Adding the Required Packages used for the application.
• Creating Components and Services, CSS.
• Creating Reactive Forms and Validations to the Forms.
• Creating Service methods to fetch the response.
• Passing the Response from the Service to the component class.
• Implemented the Query params using routing.
• Integrated the Payment Gateway using Stripe API for payments.

## Core Concepts Used In The Project:

• **Object-Oriented**: used to create and model objects for users and their credentials.
• **Reactive Forms**: Reactive forms provide a model-driven approach to handling form inputs whose values change over time along with Validations.
• **Component**: Angular components are a subset of directives, always associated with a template.
• **Lifecycle hooks**: ngOnInit()
• **Data Binding**: Data binding deals with how to bind your data from components to HTML DOM elements (Templates). We can easily interact with applications without worrying about how to insert our data. We can make connections in two different ways: “1-way” and “2-way binding”.
• **Directives**: In Angular, Directives are defined as classes that can add new behaviour to the elements in the template or modify existing behaviour.
• **Routing**: The process of defining the navigation element and its associated view is called routing in Angular. Angular provides a separate module, the Router module, for setting up navigation in an Angular application.
• **Services**: Angular Services is a piece of reusable code with a focused purpose. A code that you will use across multiple components in your application.
• **Databases**: used to store and retrieve data.
• **Data Sources**: used to define a set of properties required to identify and access the database.
• **Collections**: used some collections such as array-list to store collection of data.
• **Collections**: used Java8 Streams to filter and fetch a collection of data.
• Custom Exception Handling: used to catch problems that arise in the code, especially in I/O blocks.
• **MVC**: Micro Service is an architecture that allows the developers to develop and deploy services independently.
• **Micro Services (Spring Boot)**: Micro Service is an architecture that allows developers to develop and deploy services independently.
• **RXJS Concepts**: RxJS provides an implementation of the Observable type, which is needed until the type becomes part of the language. The library also provides utility functions for creating and working with observables.
• **API**: API stands for application programming interface, which is a set of definitions and protocols for building and integrating application software.

## Technologies Used in the Product:

1. **Angular**: To create a Quiz Application.
2. **Angular Material**: Angular Material is a User Interface (UI) component library that developers can use in their Angular projects to speed up the development of elegant and consistent user interfaces.
3. **Visual Studio Code**: Visual Studio Code is a streamlined code editor with support for development operations like debugging, task running, and version control. It aims to provide just the tools a developer needs for a quick code-build-debug cycle.
4. **Spring Boot**: To create an E-commerce project for Sporty Shoes.
5. **Postman**: To the API request and response.
6. **MySQL**: To create and manage the database.
7. **JPA**: To manage the operations for the application.
8. **Lombok**: It is the tool of the java library that was used to generate code for minimising the unused code.
9. **Rest-API**: To create the API methods and to check the response of the object entities.
10. **Eclipse**: To write and execute the code.
11. **Tomcat**: To deploy application

## Admin Portal:

It deals with all the backend data generation and product information. The admin user can manage the following functions:

1. Add or remove different genres to or from the application to build a rich product line
2. Edit movie details like name, ticket price, language, description, and show timings to keep it aligned to the current prices
3. Enable or disable the movie shows from the application

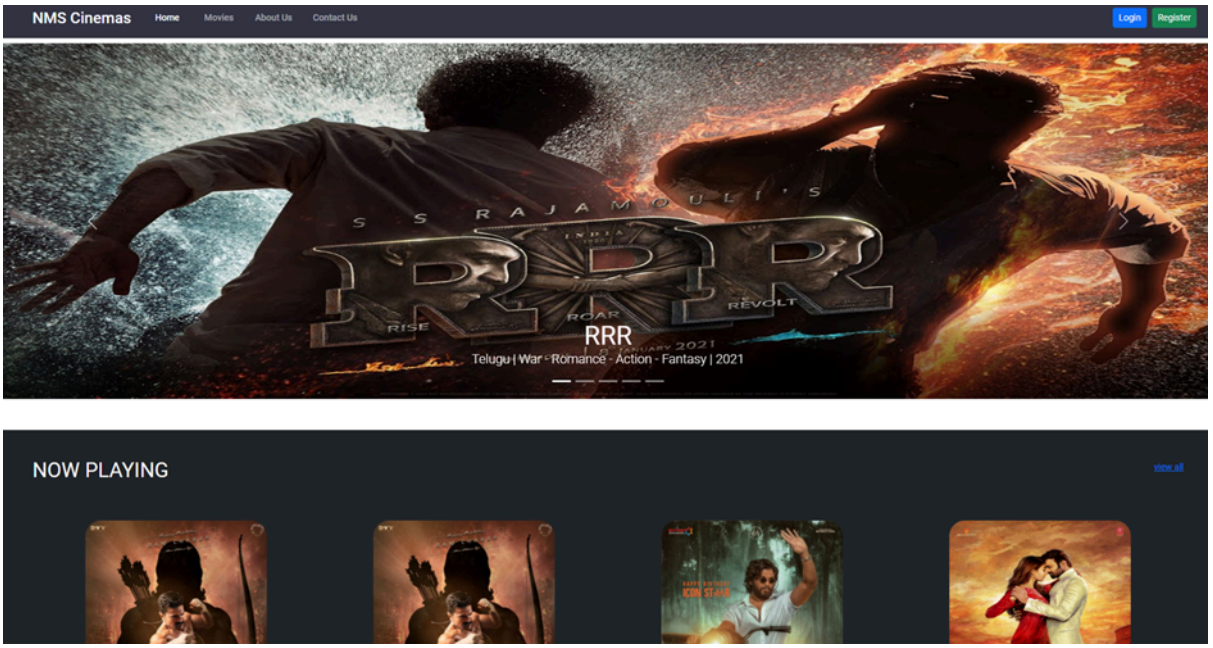
## User Portal:

The end-user can do:

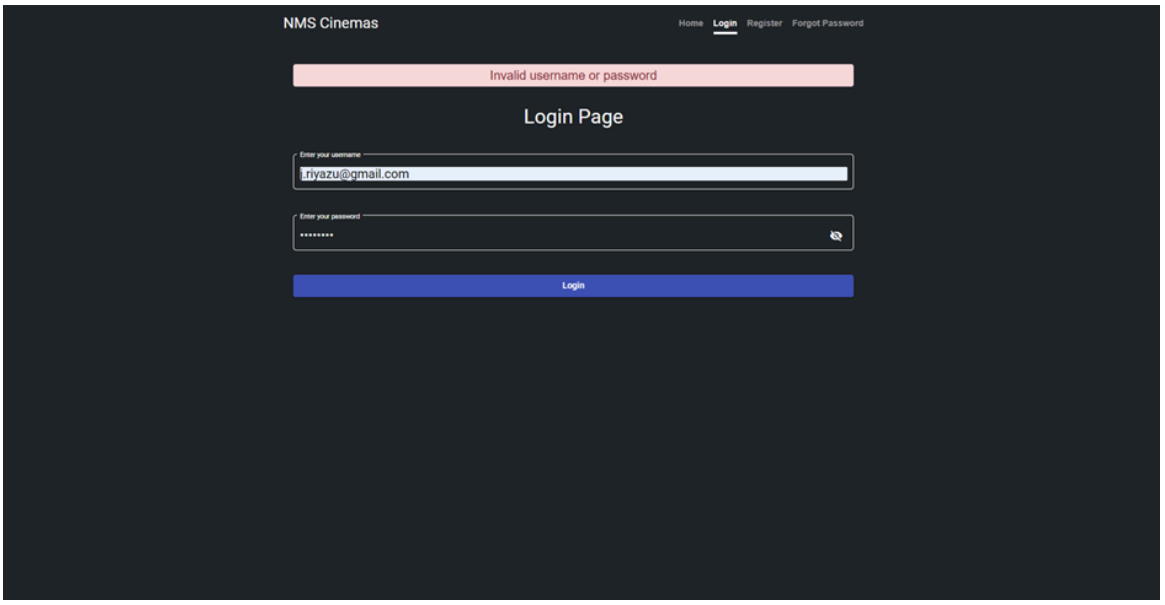
1. Sign-in to the application to maintain a record of activities
2. Search for movie tickets based on the search keyword
3. Apply filters and sort results based on different genres
4. Add all the selected movie tickets to a cart and customise the purchase at the end
5. Experience a seamless payment process
6. Receive a booking summary page once the payment is complete

## Screenshots (Product Experience):

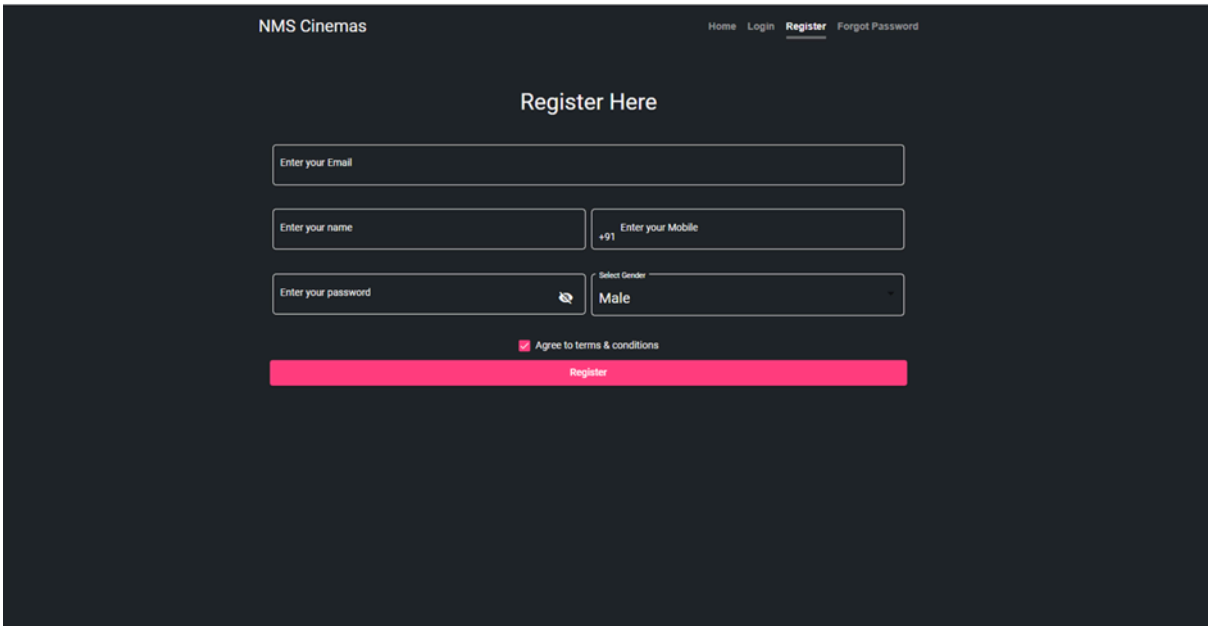
1. Home Page



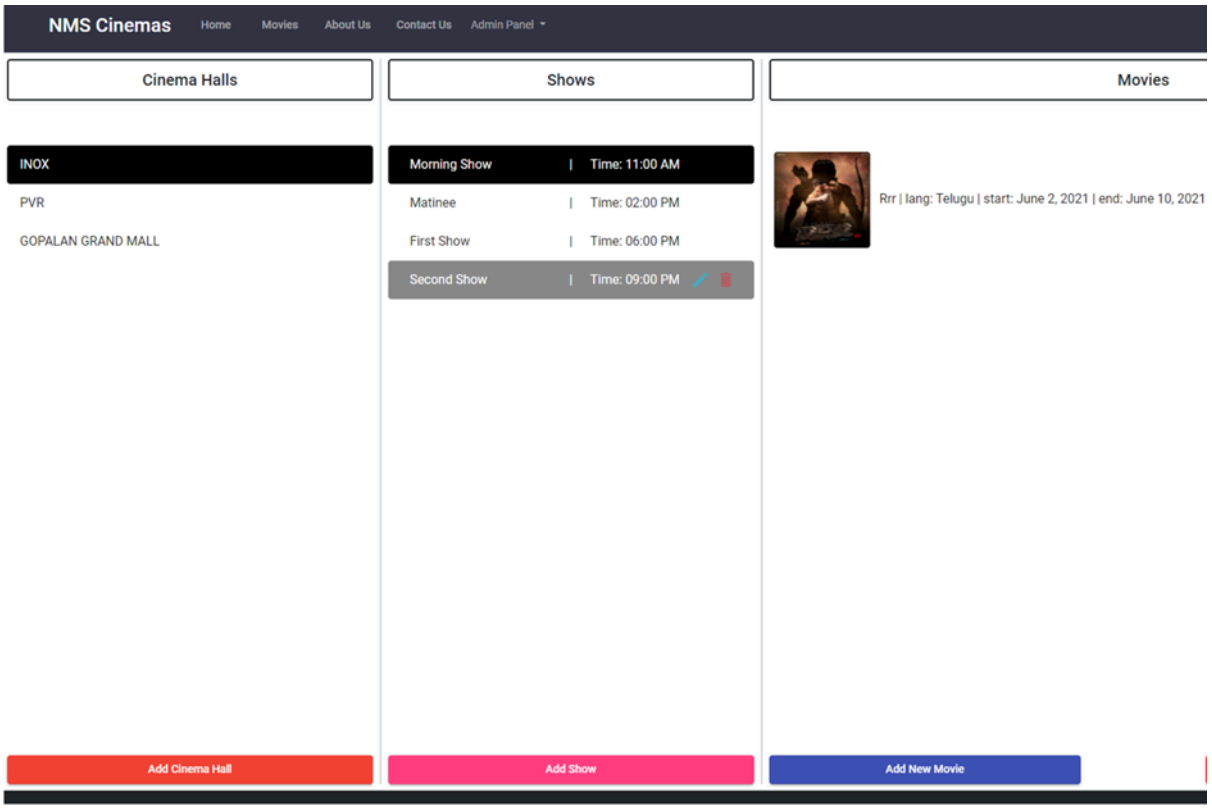
2. Login Page



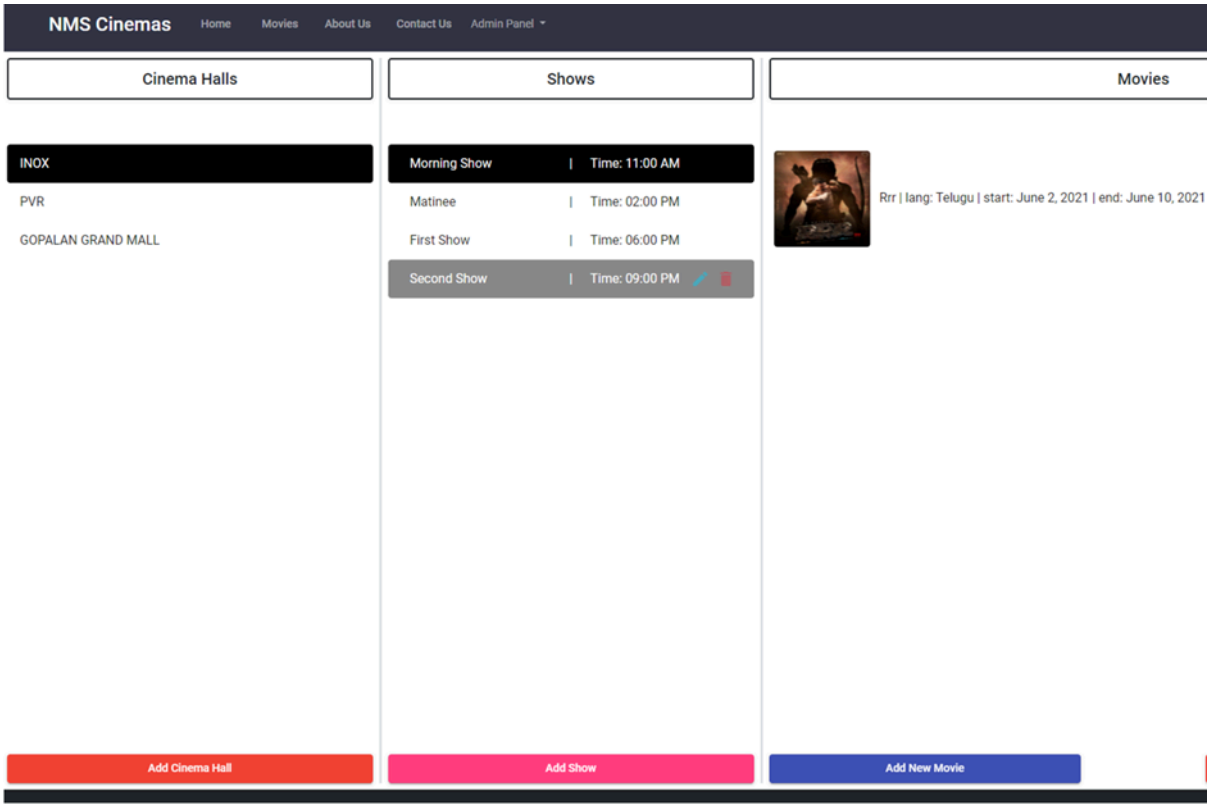

3. Registration Page:



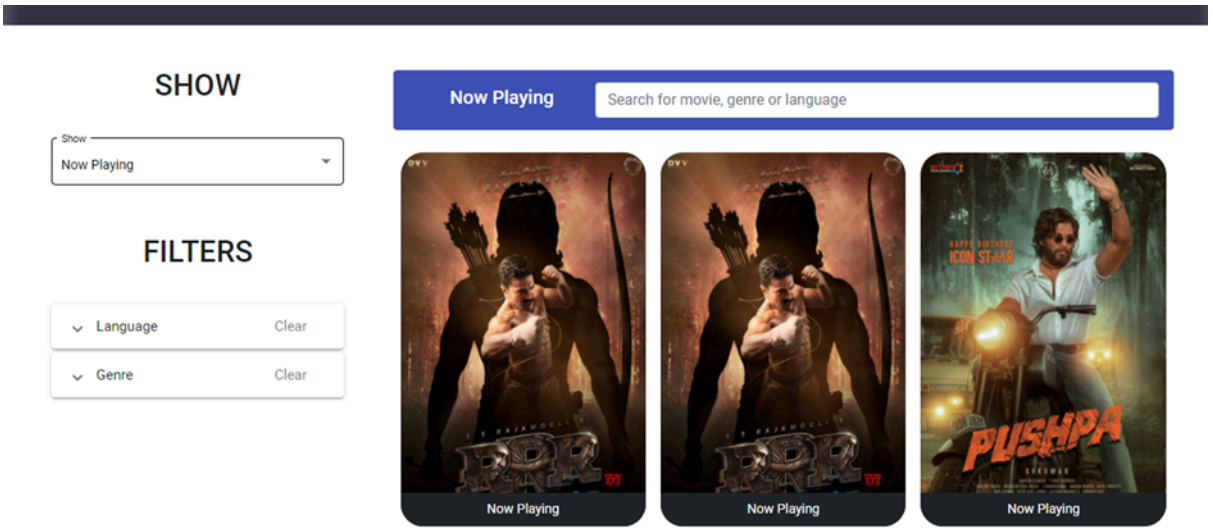
4. User Home Page



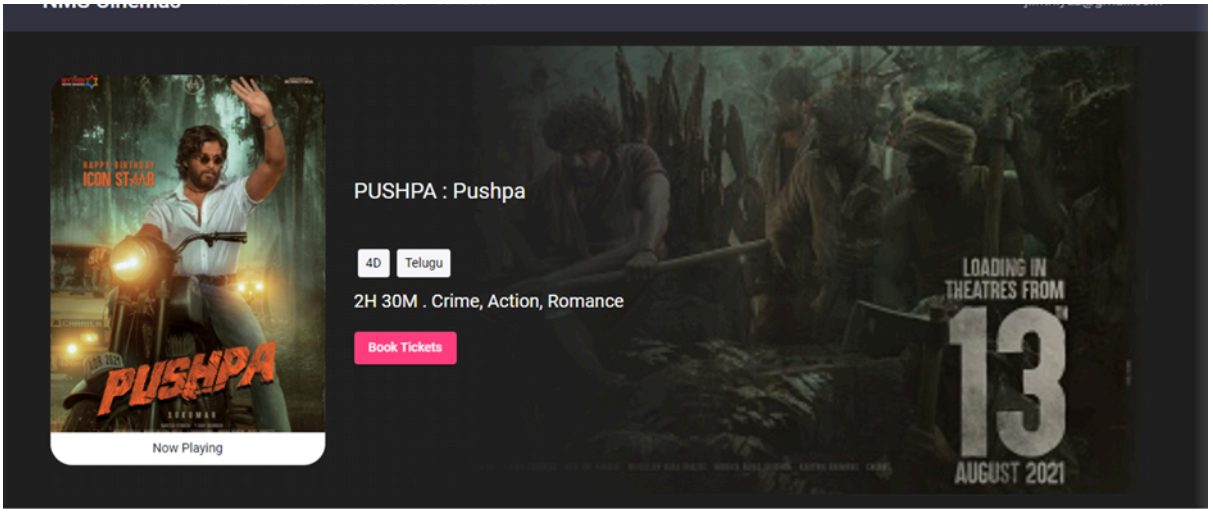

5. Your Profile (MyAccount)



6. Display Details



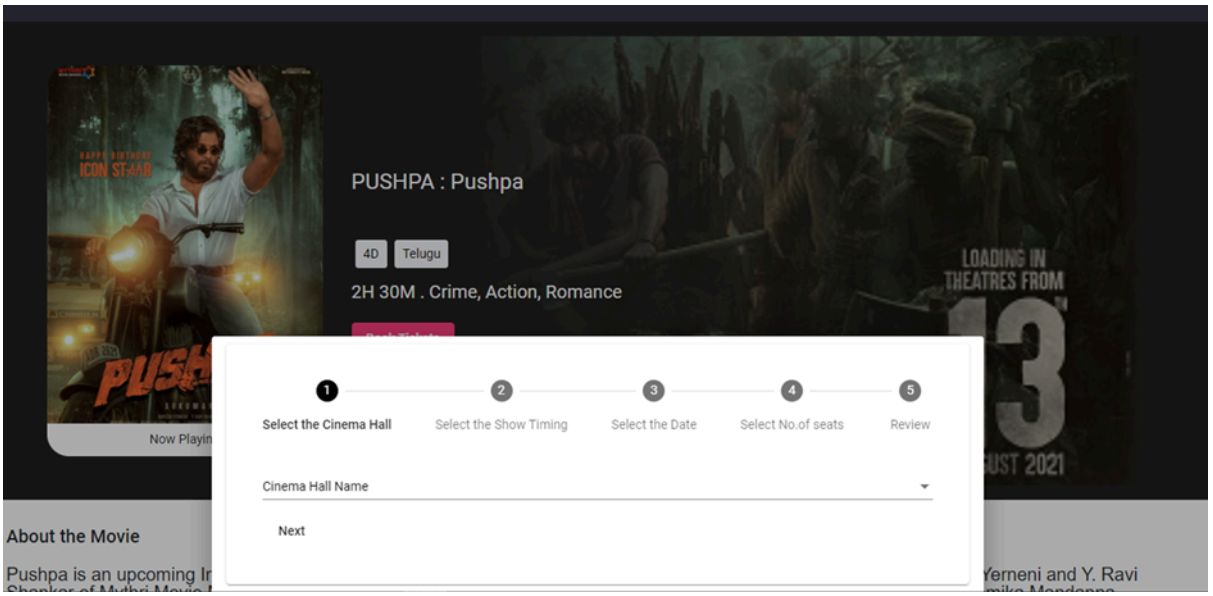

7. Movie Details:



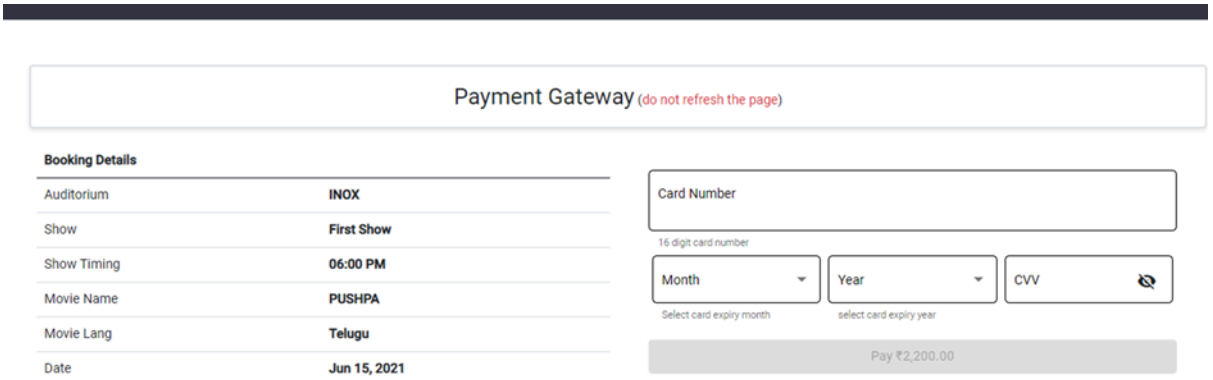

About the Movie

Pushpa is an upcoming Indian Telugu-language action thriller film written and directed by Sukumar. Produced by Naveen Yerneni and Y. Ravi

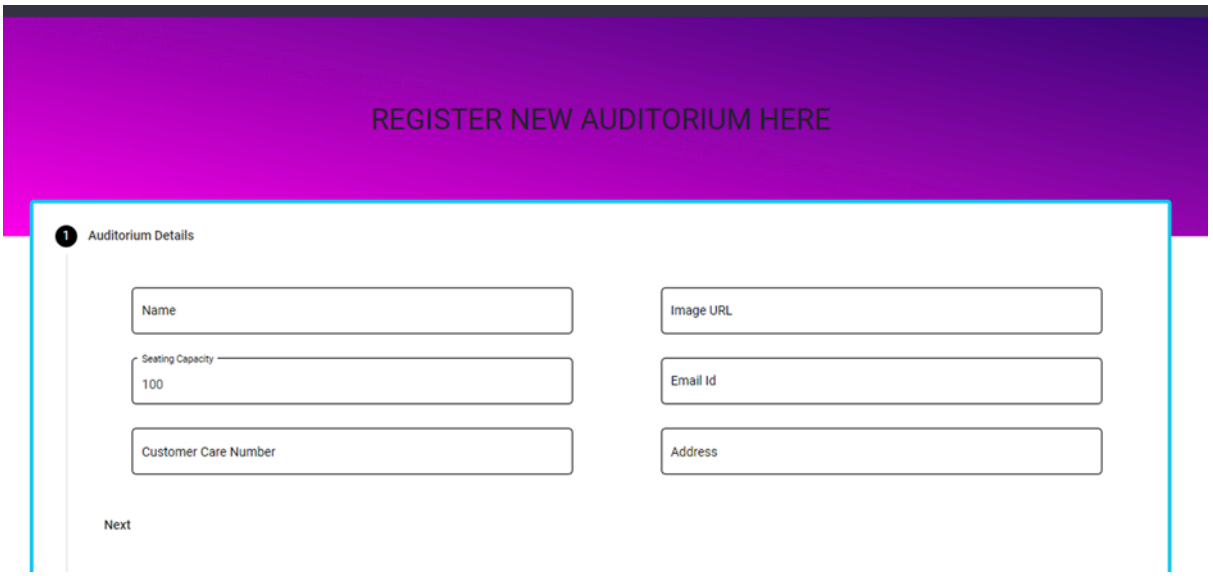
8. Booking/Purchasing Process



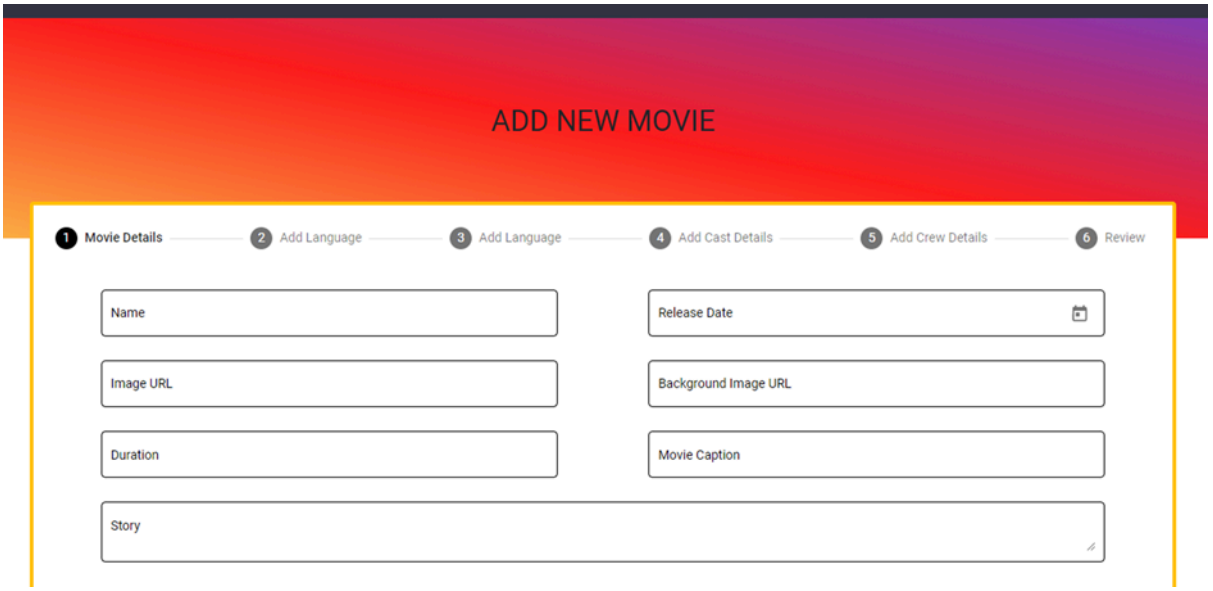

9. Payment Details



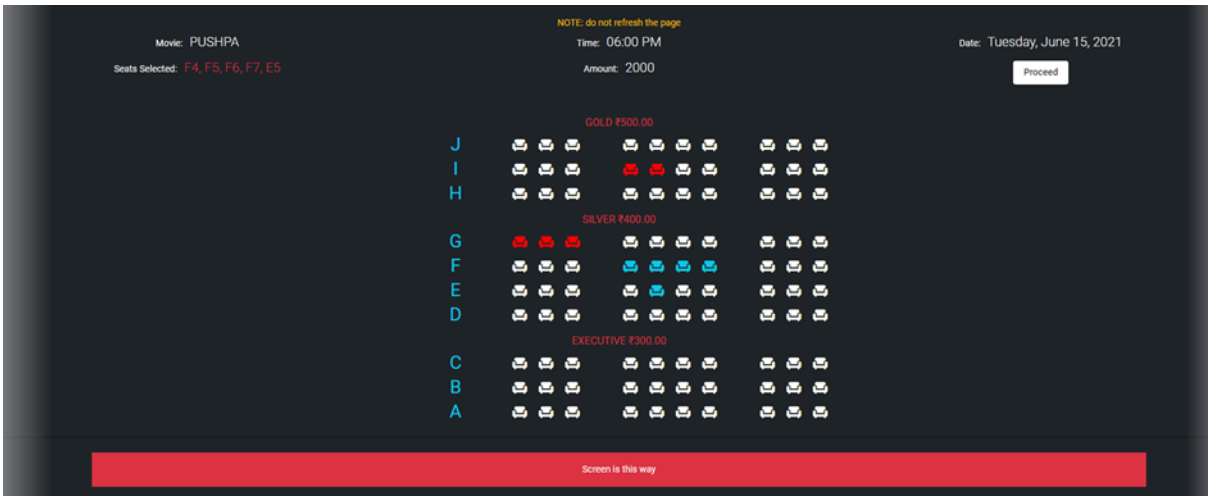
10. Register New Auditorium



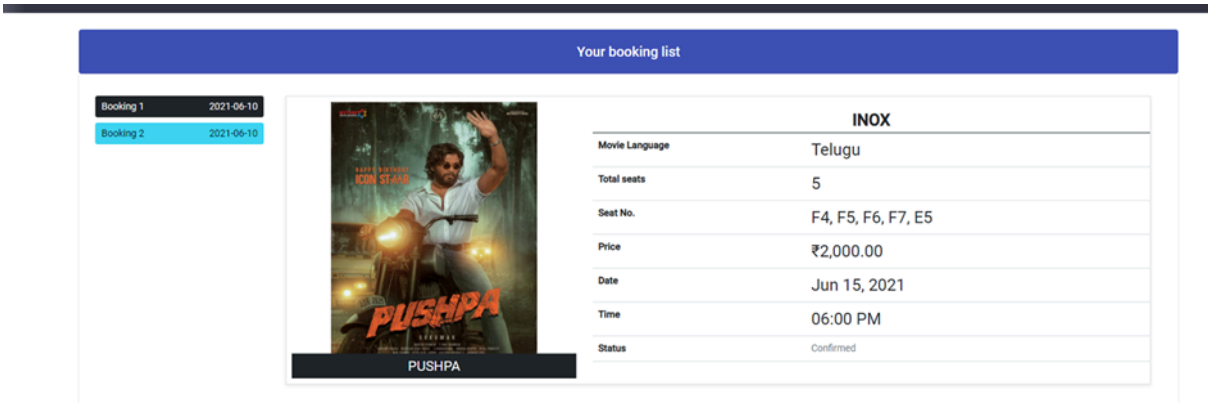

11. Add A New Movie



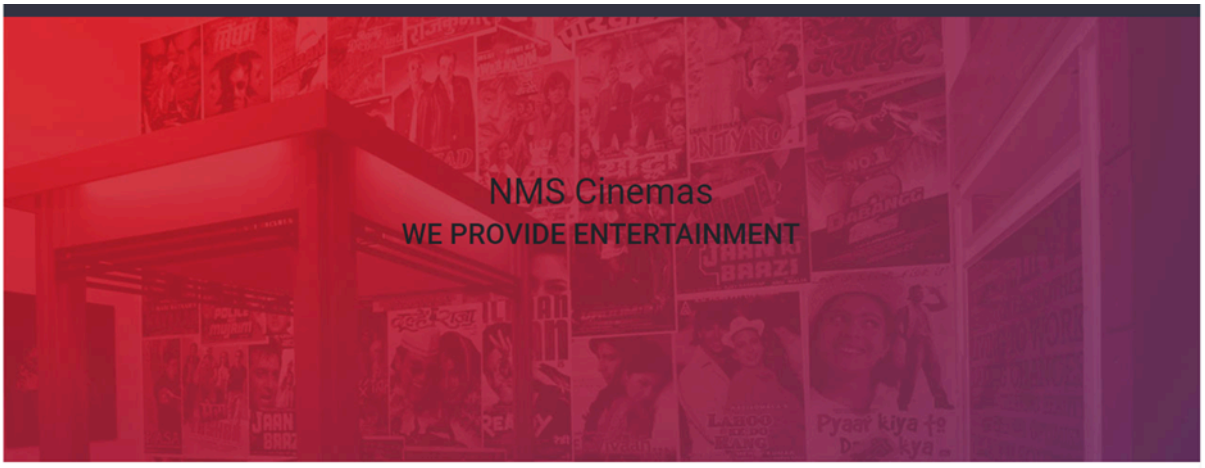
12. Seat Selection




13. Booking Confirmation

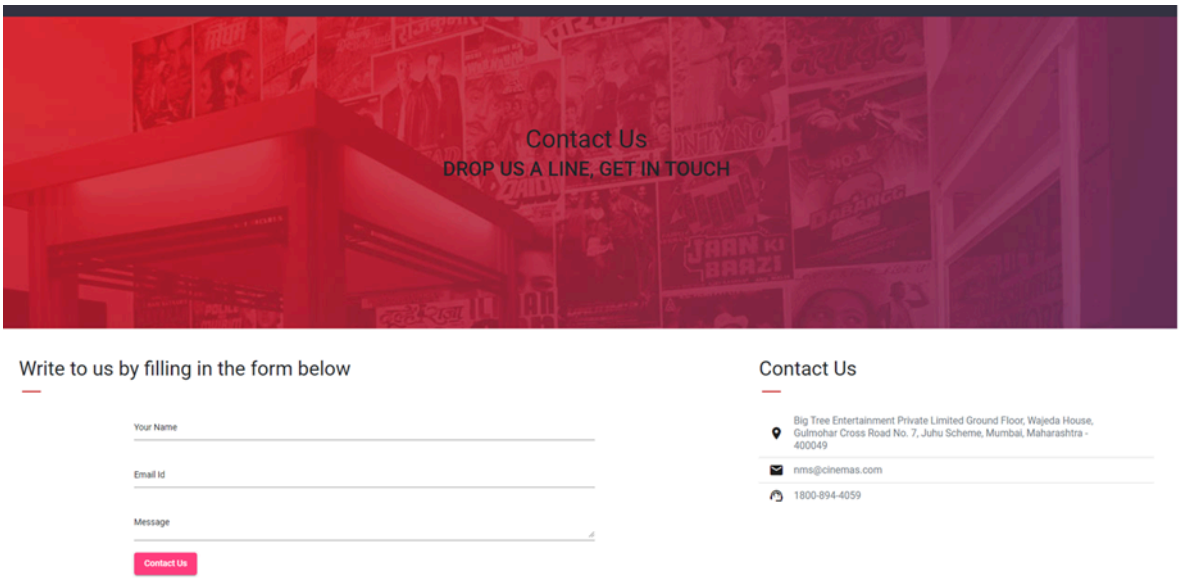



14. About Us Info




About Us

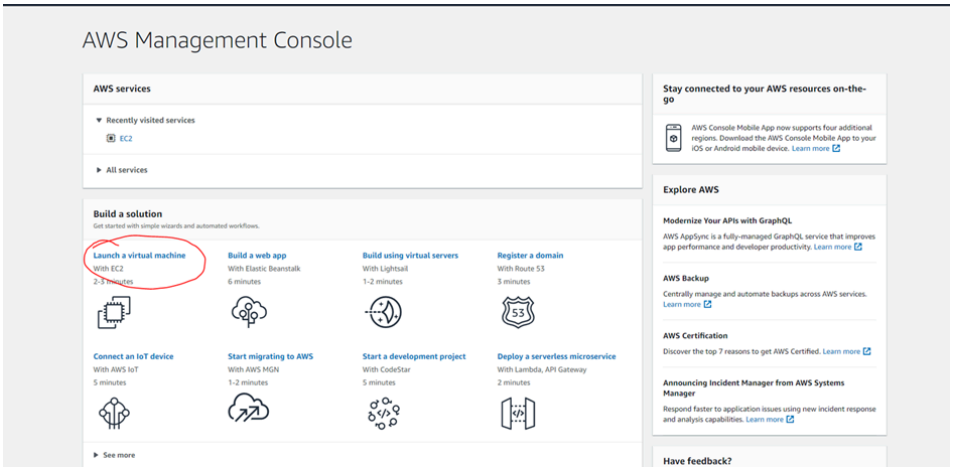
15. Contact Us

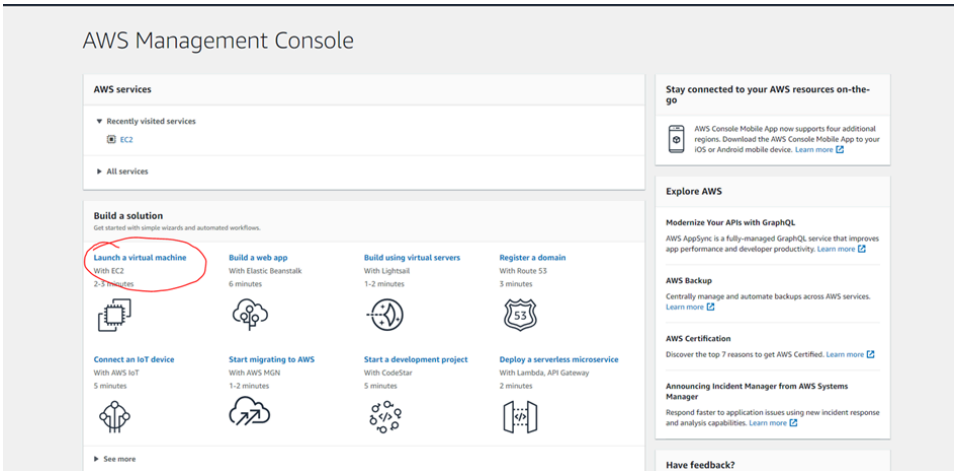



## Git Repository:

[Boigantso/CapstoneFullStack (github.com)]

# AWS Console:


AWS Management Console
AWS services
Recently visited services
EC2
All services
Build a solution
Get started with simple wizards and automated workflows.
Launch a virtual machine
With EC2
2-3 minutes
Build a web app
With Elastic Beanstalk
6 minutes
Build using virtual servers
With Lightsail
1-2 minutes
Register a domain
With Route 53
3 minutes
Connect an IoT device
With AWS IoT
5 minutes
Start migrating to AWS
With AWS MGN
1-2 minutes
Start a development project
With CodeStar
5 minutes
Deploy a serverless microservice
With Lambda, API Gateway
2 minutes
See more
Stay connected to your AWS resources on-the-go
AWS Console Mobile App now supports four additional regions. Download the AWS Console Mobile App to your iOS or Android mobile device. Learn more
Explore AWS
Modernize Your APIs with GraphQL
AWS AppSync is a fully-managed GraphQL service that improves app performance and developer productivity. Learn more
AWS Backup
Centrally manage and automate backups across AWS services. Learn more
AWS Certification
Discover the top 7 reasons to get AWS Certified. Learn more
Announcing Incident Manager from AWS Systems Manager
Respond faster to application issues using new incident response and analysis capabilities. Learn more
Have feedback?


AWS Management Console
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AWS Backup
Centrally manage and automate backups across AWS services. Learn more
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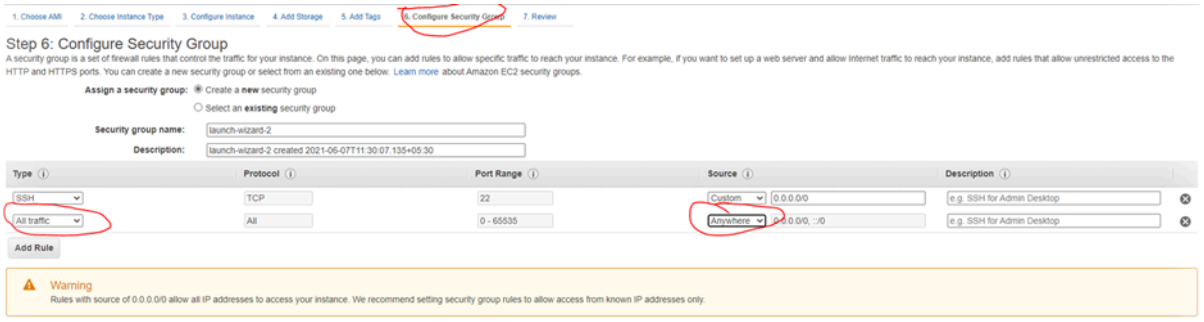
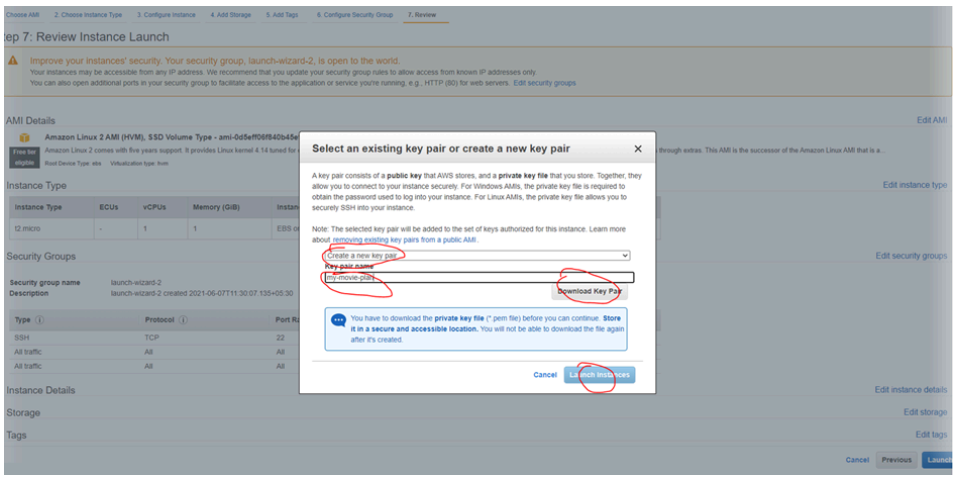
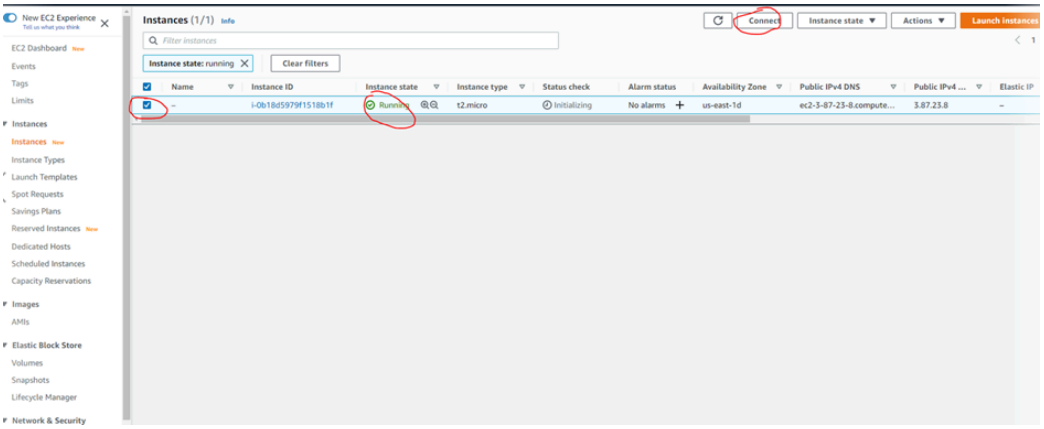
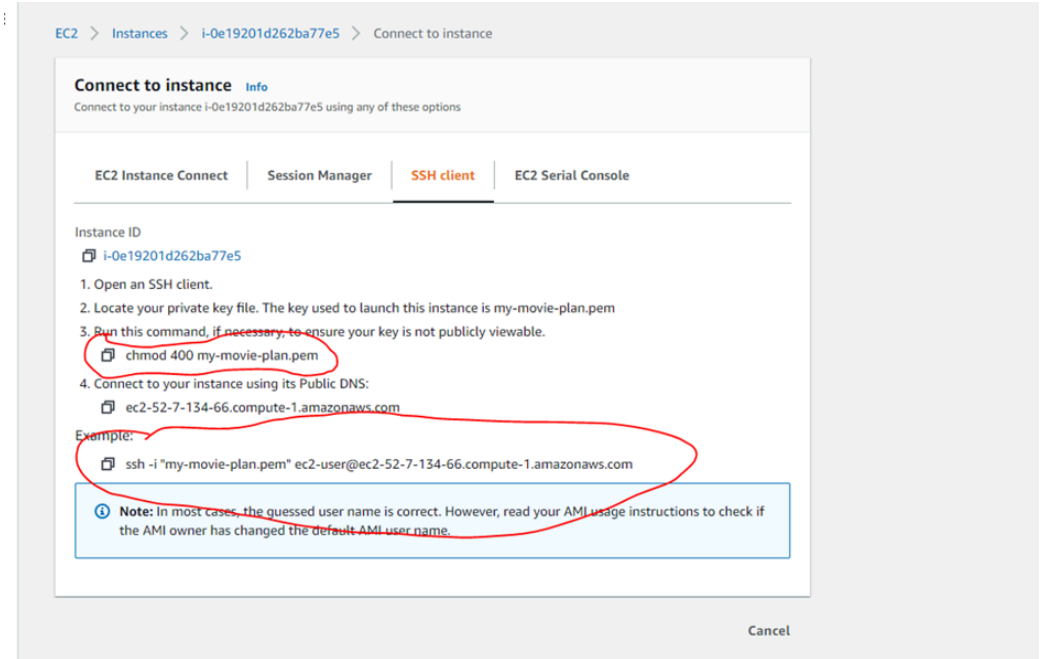

1. Choose AMI
2. Choose Instance Type
3. Configure Instance
4. Add Storage
5. Add Tags
6. Configure Security Group
7. Review
Step 6: Configure Security Group
A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. Learn more about Amazon EC2 security groups.
Assign a security group:
Create a new security group
Select an existing security group
Security group name:
launch-wizard-2
Description:
launch-wizard-2 created 2021-06-07T11:30:07.135+05:30
Type
Protocol
Port Range
Source
Description
SSH
TCP
22
Custom
0.0.0.0/0
e.g. SSH for Admin Desktop
All traffic
All
0 - 65535
Anywhere
0.0.0.0/0, ::/0
e.g. SSH for Admin Desktop
Add Rule
Warning
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.


Step 7: Review Instance Launch
Improve your instances' security. Your security group, launch-wizard-2, is open to the world.
AMI Details
Instance Type
Security Groups
Instance Details
Storage
Tags
Select an existing key pair or create a new key pair
A key pair consists of a public key that AWS stores, and a private key file that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.
Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about removing existing key pairs from a public AMI.
Create a new key pair
Key pair name
my-movie-plan
Download Key Pair
You have to download the private key file (*.pem file) before you can continue. Store it in a secure and accessible location. You will not be able to download the file again after it's created.
Cancel
Launch Instances


Instances (1/1)
Connect
Instance state
Actions
Launch instances
Instance state: running
Clear filters
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Zone
Public IPv4 DNS
Public IPv4 ...
Elastic IP
i-0b18d5979f1518b1f
Running
t2.micro
Initializing
No alarms
us-east-1d
ec2-3-87-23-8.compute...
3.87.23.8

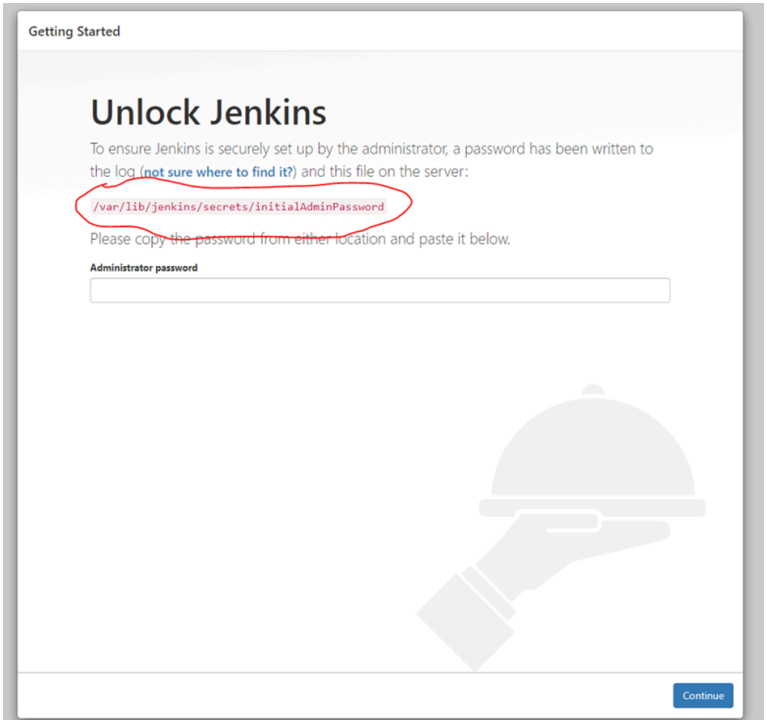

EC2 > Instances > i-0e19201d262ba77e5 > Connect to instance
Connect to instance Info
Connect to your instance i-0e19201d262ba77e5 using any of these options
EC2 Instance Connect
Session Manager
SSH client
EC2 Serial Console
Instance ID
i-0e19201d262ba77e5
1. Open an SSH client.
2. Locate your private key file. The key used to launch this instance is my-movie-plan.pem
3. Run this command, if necessary, to ensure your key is not publicly viewable.
chmod 400 my-movie-plan.pem
4. Connect to your instance using its Public DNS:
ec2-52-7-134-66.compute-1.amazonaws.com
Example:
ssh -i "my-movie-plan.pem" ec2-user@ec2-52-7-134-66.compute-1.amazonaws.com
Note: In most cases, the guessed user name is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI user name.
Cancel

# Jenkins:

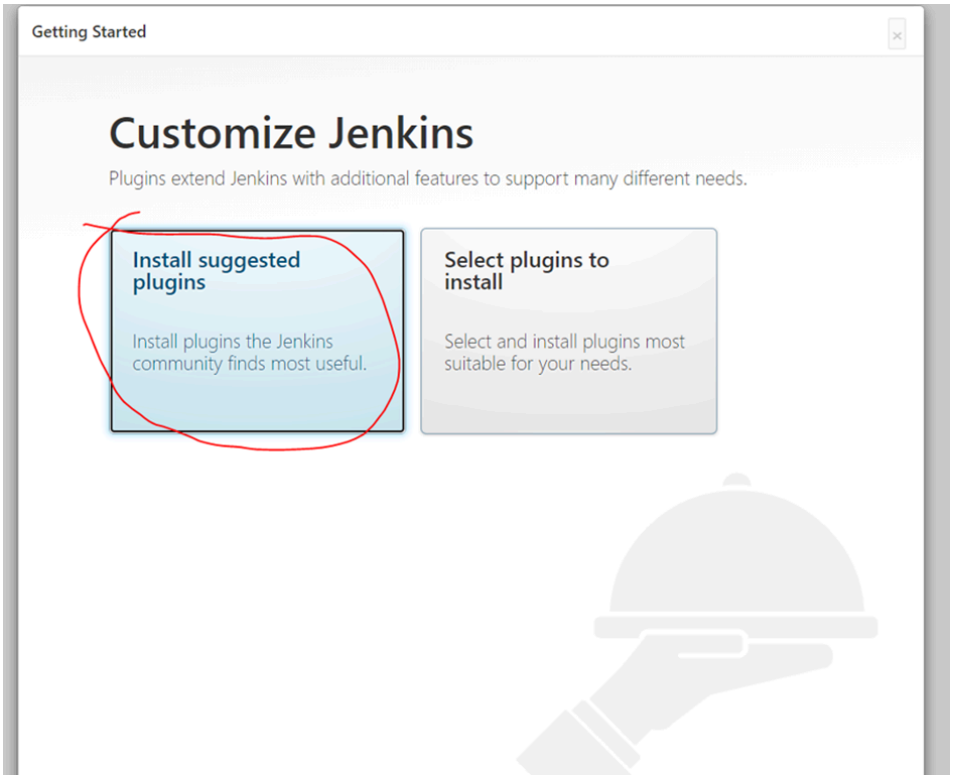
```
$ ssh -i "my-movie-plan.pem" ec2-user@ec2-52-7-134-66.compute-1.amazonaws.com
The authenticity of host 'ec2-52-7-134-66.compute-1.amazonaws.com (52.7.134.66)' can't be established.
ECDSA key fingerprint is SHA256:W2ndOKDsigxx6WpnWePv9ya8umIsUNYw/ntPzLfvTxE.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-52-7-134-66.compute-1.amazonaws.com,52.7.134.66' (ECDSA) to the list of known hosts.

       __|  __|_  )
       _|  (     /   Amazon Linux 2 AMI
      ___|\___|___|

https://aws.amazon.com/amazon-linux-2/
5 package(s) needed for security, out of 17 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-86-0 ~]$ sudo yum update -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
---> Package chrony.x86_64 0:3.5.1-1.amzn2.0.1 will be updated
---> Package chrony.x86_64 0:4.0-3.amzn2.0.1 will be an update
---> Package ec2-utils.noarch 0:1.2-43.amzn2 will be updated
---> Package ec2-utils.noarch 0:1.2-44.amzn2 will be an update
---> Package glibc.x86_64 0:2.26-44.amzn2 will be updated
---> Package glibc.x86_64 0:2.26-45.amzn2 will be an update
---> Package glibc-all-langpacks.x86_64 0:2.26-44.amzn2 will be updated
---> Package glibc-all-langpacks.x86_64 0:2.26-45.amzn2 will be an update
---> Package glibc-common.x86_64 0:2.26-44.amzn2 will be updated
---> Package glibc-common.x86_64 0:2.26-45.amzn2 will be an update
---> Package glibc-locale-source.x86_64 0:2.26-44.amzn2 will be updated
---> Package glibc-locale-source.x86_64 0:2.26-45.amzn2 will be an update
---> Package glibc-minimal-langpack.x86_64 0:2.26-44.amzn2 will be updated
---> Package glibc-minimal-langpack.x86_64 0:2.26-45.amzn2 will be an update
```

```
[root@ip-172-31-29-148 ~]# sudo systemctl start jenkins
[root@ip-172-31-29-148 ~]# sudo cat /var/lib/jenkins/secrets/initialAdminPassword
0811c483fdc84df7906bf37a2906754c
[root@ip-172-31-29-148 ~]#
```

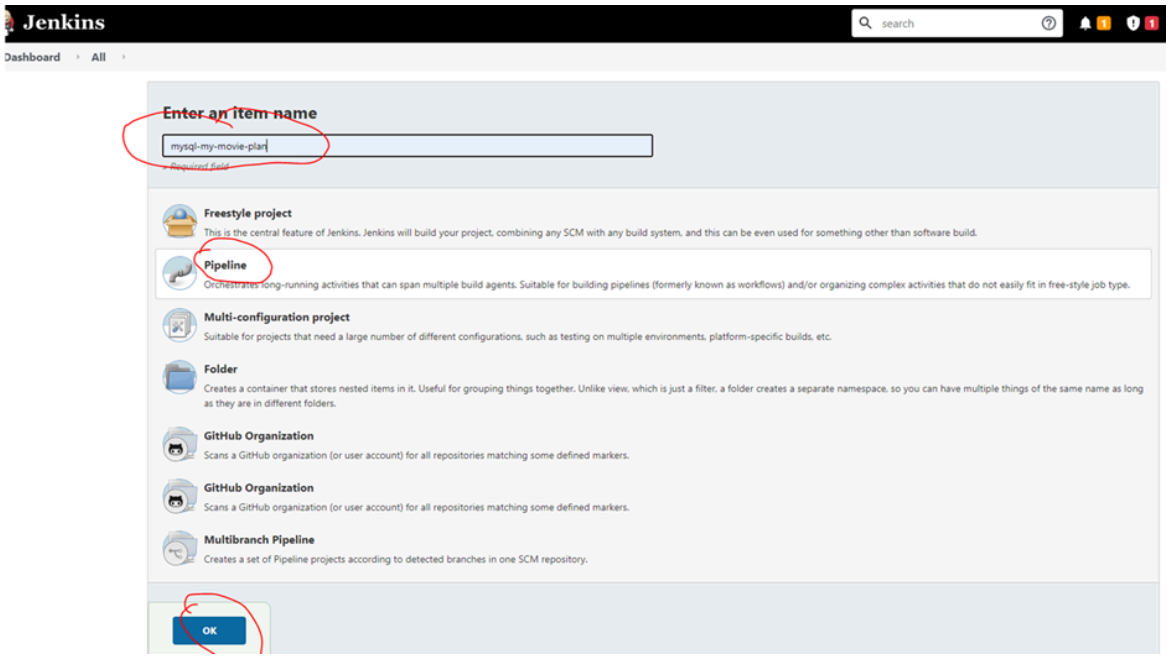
## Unlock Jenkins:



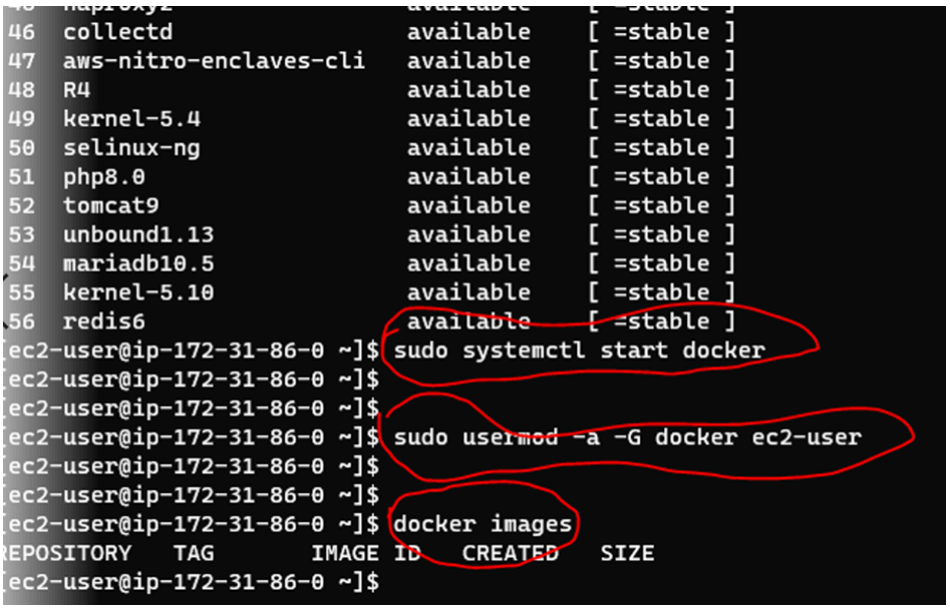
Customise Jenkins:



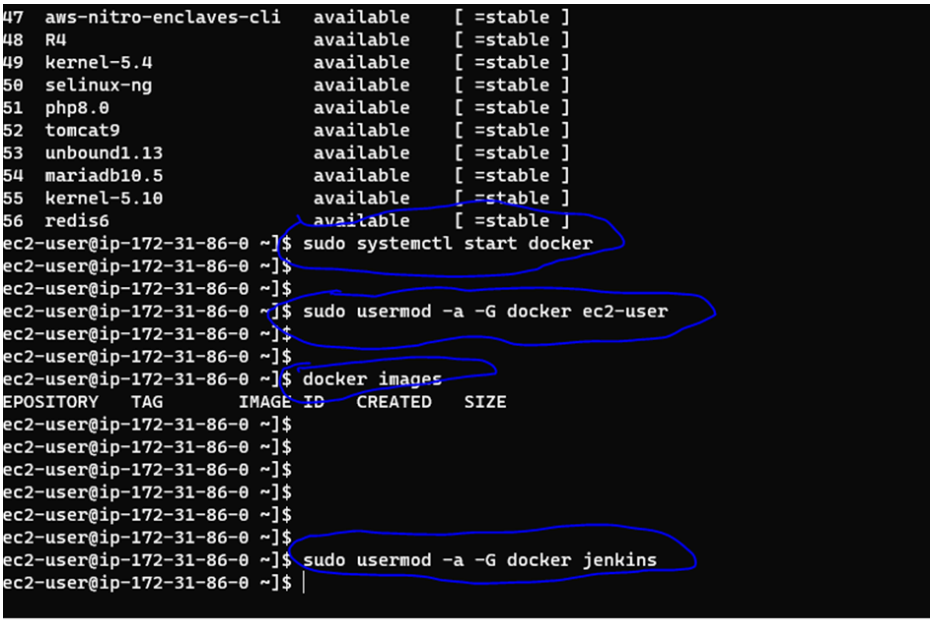

Create:



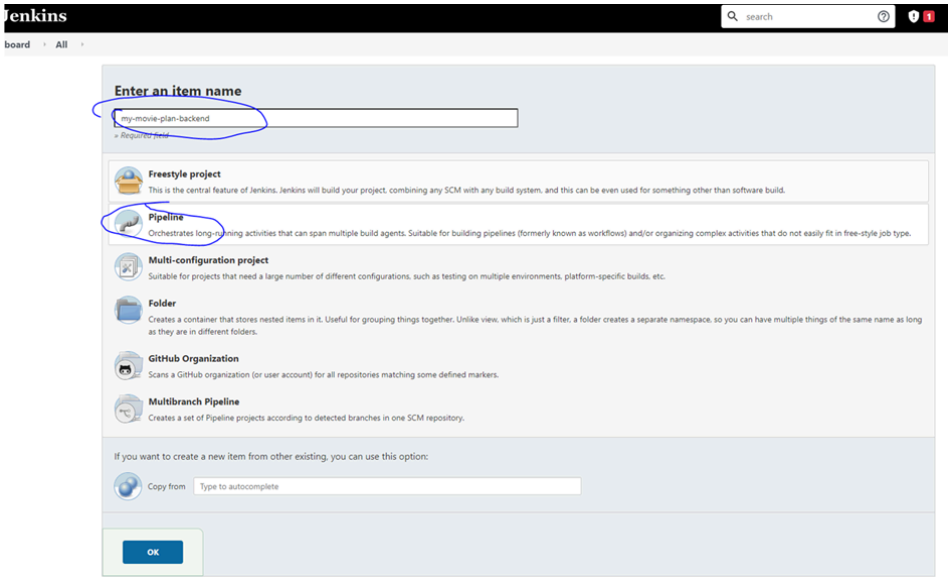
Docker 1:



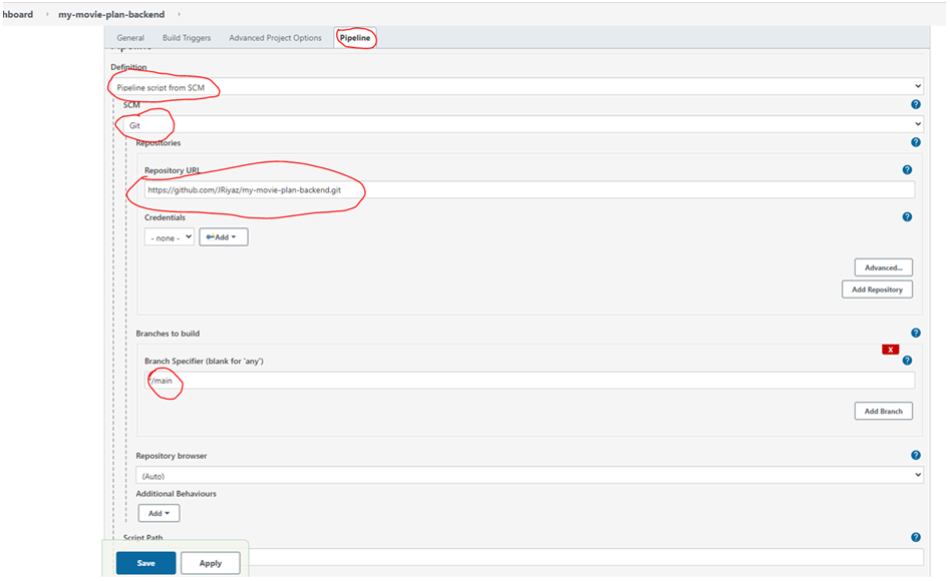

Docker 2:



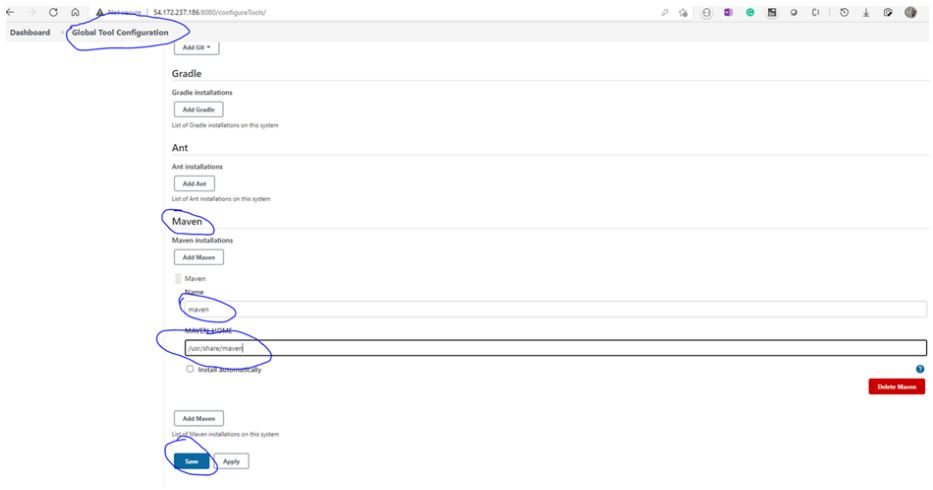
## Jenkins Details:



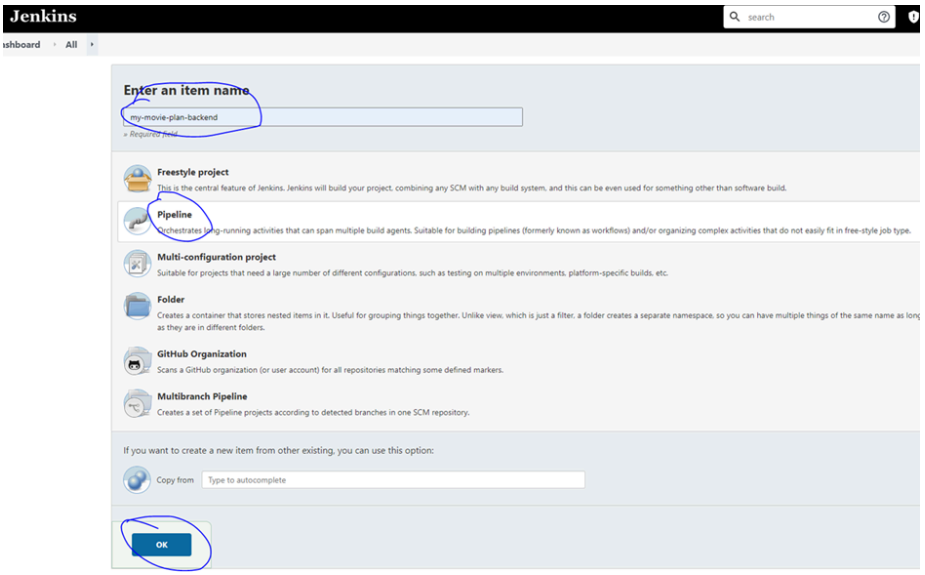

## Backend:



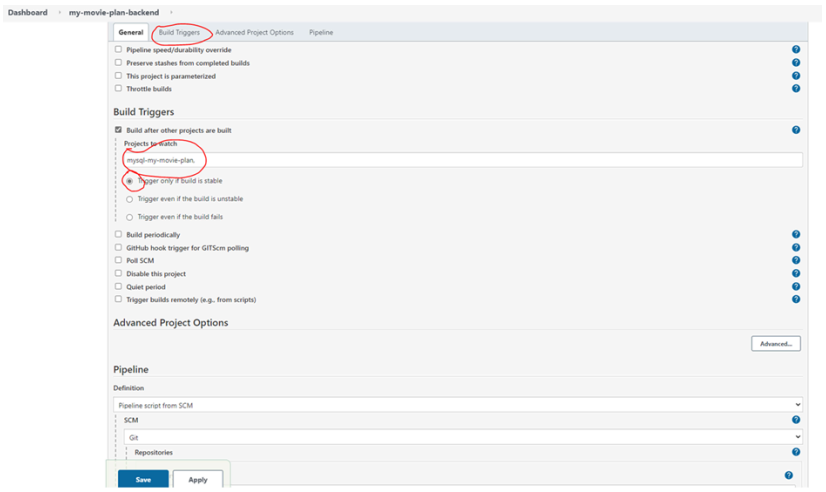
## Global Tool Configuration:




## Pipeline:




## Triggers:



## Source Code:

```
package com.example.MyMoviePlan.config;

import java.io.IOException;

import javax.servlet.Filter;

import javax.servlet.FilterChain;

import javax.servlet.FilterConfig;

import javax.servlet.ServletException;

import javax.servlet.ServletRequest;

import javax.servlet.ServletResponse;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

import org.springframework.stereotype.Component;

@Component

public class SimpleCORSFilter implements Filter{


	private final Logger log = LoggerFactory.getLogger(SimpleCORSFilter.class);

	public SimpleCORSFilter() {

		log.info("SimpleCORSFilter init");

	}

	@Override

	public void doFilter(ServletRequest req, ServletResponse res, FilterChain
chain)

			throws IOException, ServletException {
```

```
                HttpServletRequest request = (HttpServletRequest) req;

                HttpServletResponse response = (HttpServletResponse) res;

                response.setHeader("Access-Control-Allow-Origin",
request.getHeader("Origin"));

                response.setHeader("Access-Control-Allow-Credentials", "true");

                response.setHeader("Access-Control-Allow-Methods", "POST, PUT,
GET, OPTIONS, DELETE");

                response.setHeader("Access-Control-Max-Age", "3600");

                response.setHeader("Access-Control-Allow-Headers", "Content-Type,
Accept, X-Requested-With, remember-me");

                chain.doFilter(req, res);

        }

        @Override

        public void init(FilterConfig filterConfig) {

        }

        @Override

        public void destroy() {

        }

}
```

1. **Cart Controller:**

```
package com.example.MyMoviePlan.controller;
import java.util.List;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.web.bind.annotation.DeleteMapping;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;
import com.example.MyMoviePlan.model.Cart;
import com.example.MyMoviePlan.model.MovieTicket;
import com.example.MyMoviePlan.repository.CartRepository;
@RestController
@RequestMapping("/api/v1/cart")
public class CartController {

	@Autowired
	CartRepository cartRepository;

	@GetMapping("/movieTickets/all")
	public List<Cart> getAllMovieTickets() {
		return cartRepository.findAll();
```

```
    }

    @PostMapping("/movieTickets/add")
    public Cart addMovieTicketToCart(@RequestBody(required = false) Cart cart)
{
        return cartRepository.save(cart);
    }

    @DeleteMapping("/movieTickets/delete/{id}")
    public void deleteMovieTicketFromCart(@PathVariable Long id) {
        cartRepository.deleteById(id);
    }

    @DeleteMapping("/movieTickets/delete/all")
    public void deleteAllMovieTickets() {
        cartRepository.deleteAll();
    }
}
```

2. **Movie Ticket Controller:**

```
package com.example.MyMoviePlan.controller;
import java.util.List;
import java.util.Optional;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.web.bind.annotation.DeleteMapping;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.PutMapping;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;
import com.example.MyMoviePlan.model.MovieTicket;
import com.example.MyMoviePlan.repository.MovieTicketRepository;
@RestController
@RequestMapping("/api/v1/movieTicket")
public class MovieTicketController {

    @Autowired
    MovieTicketRepository movieTicketRepository;

    @GetMapping("/movieTickets/all")
    public List<MovieTicket> getAllMovieTickets() {
```

```
		return movieTicketRepository.findAll();

	}


	@GetMapping("/movieTickets/getAParticularMovie/{movieName}")

	public Optional<MovieTicket> getMovieTicketByMovieName(@PathVariable
String movieName) {

		return
movieTicketRepository.getMovieTicketByMovieName(movieName);

	}


	@GetMapping("/movieTickets/getAParticularMovieById/{id}")

	public MovieTicket getMovieTicketById(@PathVariable Long id) {

		return movieTicketRepository.getById(id);

	}


	@PostMapping("/movieTickets/add")

	public MovieTicket addMovieTicket(@RequestBody(required = false)
MovieTicket movieTicket) {

		return movieTicketRepository.save(movieTicket);

	}


	@PutMapping("/movieTickets/update")

	public MovieTicket updateMovieTicket(@RequestBody(required = false)
MovieTicket movieTicket) {

		return movieTicketRepository.save(movieTicket);

	}
```

```
	@DeleteMapping("/movieTickets/delete/{id}")
	public void deleteMovieTicket(@PathVariable Long id) {
		movieTicketRepository.deleteById(id);
	}
}
```

3. **Movie Ticket Search Controller:**

```
package com.example.MyMoviePlan.controller;
import java.util.List;
import java.util.Optional;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.web.bind.annotation.DeleteMapping;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;
import com.example.MyMoviePlan.model.MovieTicketSearchResults;
import com.example.MyMoviePlan.repository.MovieTicketSearchResultsRepository;
@RestController
@RequestMapping("/api/v1/movieTicketSearchResults")
public class MovieTicketSearchResultsController {
```

```
	@Autowired
	private MovieTicketSearchResultsRepository
movieTicketSearchResultsRepository;

	@GetMapping("/movieTicket/search/results/all")
	public List<MovieTicketSearchResults> getMovieTicketByMovieName() {
		return movieTicketSearchResultsRepository.findAll();
	}

	@PostMapping("/movieTicket/search/results/add")
	public MovieTicketSearchResults createMovieTicketSearchResult(
			@RequestBody(required = false) String
movieTicketSearchResults) {

		MovieTicketSearchResults movieTicketSearchResults1 = new
MovieTicketSearchResults();

movieTicketSearchResults1.setMovieName(movieTicketSearchResults);
		return
movieTicketSearchResultsRepository.save(movieTicketSearchResults1);
	}

	@DeleteMapping("/movieTicket/search/results/delete/")
	public void deleteAllMovieTicketSearchResults() {
		movieTicketSearchResultsRepository.deleteAll();
	}
}
```

4. **User Controller:**

```
package com.example.MyMoviePlan.controller;
import java.util.List;
import java.util.Optional;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;
import com.example.MyMoviePlan.model.Cart;
import com.example.MyMoviePlan.model.User;
import com.example.MyMoviePlan.repository.UserRepository;
@RestController
@RequestMapping("/api/v1/user")
public class UserController {

    @Autowired
    UserRepository userRepository;
```

```
	@PostMapping("/users/add")
	public User addUser(@RequestBody(required = false) User user) {
		return userRepository.save(user);
	}

	@GetMapping("/users/getParticularUser/{id}")
	public Optional<User> getUserById(@PathVariable Long id) {
		return userRepository.findById(id);
	}

	@GetMapping("/users/getAParticularUser/details")
	public Optional<User> getUserDetails(@RequestBody(required = false) User
user) {
		return userRepository.getUserDetails(user.getId(), user.getFirstName(),
user.getLastName(),

user.getUsername(), user.getEmail());
	}

	@GetMapping("/users/all")
	public List<User> getAllUsers() {
		return userRepository.findAll();
	}
}
```

5. **Cart Model:**

```
package com.example.MyMoviePlan.model;

import javax.persistence.Column;

import javax.persistence.Entity;

import javax.persistence.GeneratedValue;

import javax.persistence.GenerationType;

import javax.persistence.Id;

import javax.persistence.Table;

@Entity

@Table(name = "cart")

public class Cart {


    @Id

    @GeneratedValue(strategy = GenerationType.AUTO)

    @Column(name = "id")

    private Long id;


    @Column(name = "movie_name")

    private String movieName;


    @Column(name = "show_date")

    private String showDate;


    @Column(name = "show_time")

    private String showTime;
```

```
	@Column(name = "showing_location")
	private String showingLocation;

	@Column(name = "price")
	private Long price;

	public Cart() {}
	public Cart(String movieName, String showDate, String showTime, String showingLocation, Long price) {
		super();
		this.movieName = movieName;
		this.showDate = showDate;
		this.showTime = showTime;
		this.showingLocation = showingLocation;
		this.price = price;
	}
	public Long getId() {
		return id;
	}
	public void setId(Long id) {
		this.id = id;
	}
	public String getMovieName() {
		return movieName;
```

```
}
public void setMovieName(String movieName) {
	this.movieName = movieName;
}
public String getShowDate() {
	return showDate;
}
public void setShowDate(String showDate) {
	this.showDate = showDate;
}
public String getShowTime() {
	return showTime;
}
public void setShowTime(String showTime) {
	this.showTime = showTime;
}
public String getShowingLocation() {
	return showingLocation;
}
public void setShowingLocation(String showingLocation) {
	this.showingLocation = showingLocation;
}
public Long getPrice() {
	return price;
}
```

```
	public void setPrice(Long price) {
		this.price = price;
	}


}
```

6. **Movie Ticket Model:**

```
package com.example.MyMoviePlan.model;
import javax.persistence.Column;
import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
import javax.persistence.GenerationType;
import javax.persistence.Id;
import javax.persistence.Table;
@Entity
@Table(name = "movie_tickets")
public class MovieTicket {

	@Id
	@GeneratedValue(strategy = GenerationType.AUTO)
	@Column(name = "id")
```

```
    private Long id;

    @Column(name = "movie_name")
    private String movieName;

    @Column(name = "show_date")
    private String showDate;

    @Column(name = "show_time")
    private String showTime;

    @Column(name = "showing_location")
    private String showingLocation;

    @Column(name = "price")
    private Long price;

    public MovieTicket() {}

    public MovieTicket(String movieName, String showDate, String showTime,
String showingLocation,
                    Long price) {
        super();
        this.movieName = movieName;
        this.showDate = showDate;
        this.showTime = showTime;
```

```
        this.showingLocation = showingLocation;
        this.price = price;
    }
    public Long getId() {
        return id;
    }
    public void setId(Long id) {
        this.id = id;
    }
    public String getMovieName() {
        return movieName;
    }
    public void setMovieName(String movieName) {
        this.movieName = movieName;
    }
    public String getShowDate() {
        return showDate;
    }
    public void setShowDate(String showDate) {
        this.showDate = showDate;
    }
    public String getShowTime() {
        return showTime;
    }
    public void setShowTime(String showTime) {
```

```
		this.showTime = showTime;
	}
	public String getShowingLocation() {
		return showingLocation;
	}
	public void setShowingLocation(String showingLocation) {
		this.showingLocation = showingLocation;
	}
	public Long getPrice() {
		return price;
	}
	public void setPrice(Long price) {
		this.price = price;
	}


}
```

7. **Movie Ticket Search Result Model:**

```
package com.example.MyMoviePlan.model;
import javax.persistence.Column;
import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
```

```
import javax.persistence.GenerationType;
import javax.persistence.Id;
import javax.persistence.Table;
@Entity
@Table(name = "movie_ticket_search_results")
public class MovieTicketSearchResults {

	@Id
	@GeneratedValue(strategy = GenerationType.AUTO)
	@Column(name = "id")
	private long id;

	public long getId() {
		return id;
	}
	public void setId(long id) {
		this.id = id;
	}
	@Column(name = "movie_name")
	private String movieName;

	public MovieTicketSearchResults() { }
	public MovieTicketSearchResults(String movieName) {
		super();
		this.movieName = movieName;
```

```
	}
	public String getMovieName() {
		return movieName;
	}
	public void setMovieName(String movieName) {
		this.movieName = movieName;
	}
}
```

8. **User Model:**

```
package com.example.MyMoviePlan.model;
import javax.persistence.Column;
import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
import javax.persistence.GenerationType;
import javax.persistence.Id;
import javax.persistence.Table;
@Entity
@Table(name = "users")
public class User {

	@Id
	@GeneratedValue(strategy = GenerationType.AUTO)
```

```
    @Column(name = "id")
    private Long id;

    @Column(name = "first_name")
    private String firstName;

    @Column(name = "last_name")
    private String lastName;

    @Column(name = "username")
    private String username;

    @Column(name = "email")
    private String email;

    @Column(name = "password")
    private String password;

    public User() {}

    public User(String firstName, String lastName, String username, String email,
String password) {
        super();
        this.firstName = firstName;
        this.lastName = lastName;
        this.username = username;
```

```
        this.email = email;
        this.password = password;
    }
    public Long getId() {
        return id;
    }
    public void setId(Long id) {
        this.id = id;
    }
    public String getFirstName() {
        return firstName;
    }
    public void setFirstName(String firstName) {
        this.firstName = firstName;
    }
    public String getLastName() {
        return lastName;
    }
    public void setLastName(String lastName) {
        this.email  = lastName;
    }
    public String getUsername() {
        return username;
    }
    public void setUsername(String username) {
```

```
        this.username = username;
    }
    public String getEmail() {
        return email;
    }
    public void setEmail(String email) {
        this.email = email;
    }
    public String getPassword() {
        return password;
    }
    public void setPassword(String password) {
        this.password = password;
    }

}
```

9. **Cart Repository:**

```
package com.example.MyMoviePlan.repository;
import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.stereotype.Repository;
import com.example.MyMoviePlan.model.Cart;
```

```
@Repository
public interface CartRepository extends JpaRepository<Cart, Long> {

}
```

10. **Movie Ticket Repository:**

```
package com.example.MyMoviePlan.repository;
import java.util.Optional;
import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.data.jpa.repository.Query;
import org.springframework.data.repository.query.Param;
import org.springframework.stereotype.Repository;
import com.example.MyMoviePlan.model.MovieTicket;
@Repository
public interface MovieTicketRepository extends JpaRepository<MovieTicket, Long> {
	@Query(value = "SELECT * FROM movie_tickets WHERE movie_name =
:movieName", nativeQuery = true)
	public Optional<MovieTicket>
getMovieTicketByMovieName(@Param("movieName") String movieName);
}
```

11. **Movie Ticket Search Result Repository:**

```
package com.example.MyMoviePlan.repository;

import java.util.Optional;

import org.springframework.data.jpa.repository.JpaRepository;

import org.springframework.data.jpa.repository.Query;

import org.springframework.data.repository.query.Param;

import org.springframework.stereotype.Repository;

import com.example.MyMoviePlan.model.MovieTicketSearchResults;

@Repository

public interface MovieTicketSearchResultsRepository extends
JpaRepository<MovieTicketSearchResults, Long> {

	@Query(value = "SELECT * FROM movie_ticket_search_results WHERE
movieName = :movieName", nativeQuery = true)

	public Optional<MovieTicketSearchResults>
getMovieTicketByMovieName(@Param("movieName") String movieName);

}
```

**********

12. **End-User Repository:**

```
package com.example.MyMoviePlan.repository;

import java.util.Optional;

import org.springframework.data.jpa.repository.JpaRepository;

import org.springframework.data.jpa.repository.Query;
```

```
import org.springframework.data.repository.query.Param;

import org.springframework.stereotype.Repository;

import com.example.MyMoviePlan.model.User;

@Repository

public interface UserRepository extends JpaRepository<User, Long> {

	@Query(value = "SELECT * FROM users WHERE id = :id AND first_name =
:firstName AND "

			+ "last_name = :lastName AND username = :username AND
email = :email", nativeQuery = true)

	public Optional<User> getUserDetails(@Param("id") Long id,


			@Param("firstName") String firstName,


			@Param("lastName") String lastName,


			@Param("username") String username,


			@Param("email") String email);

}
```

13. **Spring Boot Backend MyMovieApplication:**

```
package com.example.MyMoviePlan;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class SpringbootBackendMyMoviePlanApplication {

	public static void main(String[] args) {
```

```
SpringApplication.run(SpringbootBackendMyMoviePlanApplication.class, args);
        }
}
```