

**Pega's University Academic Program**



# Hotel Booking Application (Project)

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**Pega’s University Academic Program**

Pega has developed university level-curriculum for students seeking degrees in Business Information Technology, Management Information Systems, Computer Information Systems, Computer Science and other related degree programs.

The primary classes focus on DPA/BPM (Digital Process Automation/Business Process Management), Pega’s core technology. Additional classes focus on AI (Artificial Technology) and RDA (Robotic Desktop Automation). After finishing the program, students can achieve Pega certification and look for sought-after internships and employment with Pega clients and partners around the world.

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Technical Course I	CSA – Certified System Architect
Technical Course II	CSSA – Certified Senior System Architect
AI/Decisioning	CPDC – Certified Pega Decisioning Consultant
Robotic Desktop Automation	CRSA – Certified Robotics System Architect

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## Scenario Overview

SAE Chain of Hotel Company is a 60 year old organization that provides different staying solutions to its customers. The organization is planning to build a Hotel Booking system to support its operations, using Pega 7.

### At a high level and with the initial Phase I release, this application will:

- Allow customer to register for the portal.
- Allow customer to choose the date and location along with type of hotel.
- Allow hotel manager to approve/reject the cancellation of any booking
- Allow customer to query for the available breakfast, lunch, snacks, dinner to the travel agent and can book the same accordingly
- Allow food manager to approve/reject the cancellation of any food booking
- Allow the manager to see customer's report along with restaurant daily and monthly status.

## Actors

- Customer
- Application Admin
- Restaurant Manager
- Food Manager

## Process overview

Hotel Booking application will include following process

- **Login:** Existing users can log in to the application to avail hotel booking facility.
- **Register:** Users sign up to the application to avail hotel booking facility. Phone number is required.
- **Plan the travel:** Customer provides the dates of stay along with location and type of hotel.
- **Choose the hotel and room:** Based on the customer input, a list of hotels and their room rate along with the room's picture will be populated from the system and the customer can choose from the list. Customer can also optionally choose the food plan. Finally the total cost will be shown.
- **Cancellation:** Customer can cancel the hotel booking or food plan.

## Detailed Process Requirements

### Log in

- Customer clicks on “log in ” link to provide email/user ID, password
- Once successfully logged in customer can navigate in the site to avail hotel booking facility

### Registration

- Customer clicks on “Register” link on portal.
- Customer provides basic data such as Name, Location, email id, mobile number, password etc. Refer to UX requirements for all details.
- A customer account is created with the user id/email and the password provided.
- Customer can now login using this id/password

### Search/Request hotel

Following process has to be followed by user to search for a hotel

- Customer logs into portal with registered user ID/email & password.
- Customer click on ‘Find your hotel’ option
- Dashboard contains a gadget with options to choose location, type of hotel, from date and to date, with Search button.
- Customer clicks on search button to get a list of matching hotel options.
- Customer can select the hotel and food plan of his/her choice and submit the request.
- Customer should pay 50% of the total amount for confirming the booking.
- An email must be sent to the customer if booking is confirmed

### Cancel hotel/food

- Customer should be able to see his hotel/food bookings and should be able to cancel them 2 days prior to the booking start date. Cancellation request must be sent to Hotel Manager/ Food Manager for approval.
- If cancellation is 1 day prior to booking start date, then appropriate cancellation fee must be collected.
- Email must be sent to the customer if cancellation is confirmed.

### Approval

- Hotel Manager/Food manager can approve/reject the cancellation.

## Feedback

- After travel, customer should give feedback for the hotel and same should be visible to hotel manager and application admin.

## Ad Hoc Requirements

- This is just a phase I application and there is no need to implement all real world hotel booking application features.
- Unauthenticated portal to be displayed to customer for registration.
- Customer can optionally take help of a booking agent to search for hotels.
- From date must not be past date.
- To date must be same or future date from the booking date.
- Appropriate calculation should be there for hotel booking along with food.
- The Direct Web Access feature can be used to send emails to customer.
- Use DWA wherever possible for emails. Wherever DWA is not applicable, emails can be viewed as attachments to the case.
- Designated portals should be there for each member. Refer to portal requirements for more details.
- Routing has to be dynamic and follow best practices.
- Case management has to be followed along with proper naming conventions.
- OOTB Reusability is expected. You can follow PDN help to learn already available features in Pega 7.
- Necessary privileges and roles have to be defined and used for security purposes.
- SLA are expected to be used for escalation and notifications purpose.
- Proper usage of New, Perform, Review, Confirm harness is expected.
- Validations should be handled at UI and server level.
- Error handling should be done with proper messages.
- HTML and inline styles are best to avoid.
- Styling should be accurate and skin rules should be used as per best practices.
- Workgroups and workbaskets are expected to be used whenever necessary.
- Data model should be simple enough to carry out all the required tasks.
- Proper rule information like usage and description is expected.
- Guardrails are expected to be minimal or at least justified for exceptional conditions.
- UI clutter should be minimal with only required information.

## UX Requirements

Below are minimum UX requirements that this application needs for flexible and dynamic process execution.

**Note:** These are minimum requirements and any additional useful requirements are welcome

### Signup:

Label	Control	Validation
User Id	text	mandatory
Password	password	mandatory

### User Registration:

Label	Control	Validation				
First Name	text	Mandatory, no special characters or numeric data				
Last Name	text	Optional , no special characters or numeric data				
Email	text	Mandatory, Must be a valid email format (xxx@xxx.xxx)				
Date Of Birth	Date picker	Mandatory, Must not be future date				
Contact No	numeric	Mandatory, Must be numeric only				
Indian Citizen	Yes/No	Mandatory				
	Yes <table border="1"> <tr> <td>State</td> <td>list</td> </tr> <tr> <td>Pin code</td> <td>numeric</td> </tr> </table>	State	list	Pin code	numeric	Mandatory
State	list					
Pin code	numeric					
	No <table border="1"> <tr> <td>Country</td> <td>list</td> </tr> <tr> <td>State</td> <td>text</td> </tr> </table>	Country	list	State	text	
Country	list					
State	text					
Address	Multiline text box	Mandatory				

### Plan Hotel and Booking:

Label	Control	Validation
From Date	Date picker	Mandatory
To Date	Date picker	Mandatory
Location	List	Mandatory
Type Of Hotel	List	Mandatory
Type Of Bed	List	Optional
	Extra bed required?	

## List of hotels:

Label	Control	Validation
Hotel Name	Text/Label	N/A
Price	Text	numeric
Location	Text	N/A

## Book A Room:

Label	Control
Room	Image
Food	Breakfast , Lunch, Dinner(Check box)
Total Cost	Text(Numeric)
<b>Payment</b>	<b>Card/ Checkout time</b>

## Portal Requirements

All Portals should have SAE branding and unnecessary details in **Perform/Confirm/Review** harness should not be displayed.

### Customer

Home portal – to sign up/login

Worker portal – to book/cancel hotel

### Hotel/Food Manager

- To approve/ reject the cancel request submitted by customer
- To see the feedback given by customer

### Application Admin

- To see the customer requests and hotel bookings and feedback

## Integration Requirements

SAE usually collects debit/credit card information from a third party. The technology used is not Pega and cannot be used directly. So they are providing REST integration to retrieve card details with **CardNumber** as parameter.

Below is details and sample JSON Response you can expect once **CardNumber** is sent as parameter.

**Service Name:** RetrieveCardDetails

**EndPointURL:**

<http://192.168.56.101:9080/Customer/RetrieveCardDetails?CardNumber=1001100110011001>

**Query String Parameter: CardNumber**

**Sample JSON Response:**

```
{"CardNumber":"1001100110011001","NameOnCard":"XYZ","DateOfExpiry":"19/09/2020","CVV":"201"}
```

**NOTE:** Service is not available for now and it is recommended to proceed with application using simulated data. JSON response can be treated as sample data to proceed with integration.

## Reporting Requirements

Following are required reports for Application admin:

- Number of bookings hotel wise

Following are required reports for Hotel Manager

- Bookings for every quarter

## Mail

- An email must be sent to the customer if booking is confirmed
- An email must be sent to the customer if cancelation is approved

## Security Requirements

- Only hotel manager can approve the hotel cancelation
- Only food manager can approve food cancelation

## Appendix

Below is some sample data you can use:

## Sample Users /Operators

Customer: [John@sae.com](mailto:John@sae.com)

Admin: [Admin@sae.com](mailto:Admin@sae.com)

## Sample WorkGroups

- HotelManager@sae

## Reference Applications:

Apart from the requirements mentioned above, please try to use the below reference applications for additional requirements.

*Hotels in makemytrip.com*