

# Pega's University Academic Program



## Online Driver Service (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.

UAP COURSES	CERTIFICATIONS
Business Course	CPBA – Certified Pega Business Architect
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

Roads and Rides (R & R) is a large transportation company in India which offers fastest car booking services to their customers. They have decided to venture in to new business initiative, allowing their customers to hire a driver through phone or online for their travel needs. R & R has decided to implement a Pega solution to assist this initiative. They initially want this service to be available in Chennai and Hyderabad Cities. In future, they may extend it to other major cities in India.

Note: For your deliverable you are not required to create an application profile or define use-cases in the product. While these steps are critical for real-world projects simulating them in an environment where no business architect or business representative would not be valuable to the overall assessment and as such is not required.

## Actors

- **Customer** – Register themselves and hire a private driver for their travel needs
- **Customer Service Executive (CSR)**– Quick book a driver on behalf of customers
- **Driver** – Register themselves and drive the car for a customer
- **Manager** – Interviews the drivers and manages the feedbacks given by the customers
- **Executive** – Manages the bookings and allots a driver for a customer
- **Business Head** – Manages various Plan and tariffs

## Process overview

At a high level and with the initial phase I release, the Online Driver Service application will include the following processes:

- **Customer Sign Up:** The customers can register with the application and create a profile for themselves
- **Driver Registration:** The driver can register with the application and start rendering their services.
- **Hire a Driver:** Registered customers can hire a private driver based on the various plans available



- Feedback Review: The manager will review the feedbacks about the drivers and take actions

## Detailed Process Requirements

### Customer Sign Up

Customers can register with the application by providing the details listed below.

1. Name
2. Mobile Number
3. Email
4. Gender
5. City
6. Address
7. Landmark
8. Password and Confirm Password.

\*The Email Id of the customer can be used to create the User Id for them.

### Driver Registration

Professional drivers can register with the application by providing their details. The details are then forwarded to the manager. The manager then reviews the profiles and initiates the background verification (accident history). The background verification is done using a third-party web service. The web service returns the number of accidents done by the driver in the past 3 years. The web service has not been implemented yet, it needs to be simulated during development. The details are present in the appendix.

The manager schedules an interview for the driver if the driver doesn't have any accident history. The manager then either selects or rejects the candidate after the interview based on the driver's performance. A mail will be sent to the driver in either case. The date of joining is mentioned in the selection mail. A user id is created for the driver on the day of joining.

The following details are collected from the driver upon registration.

Name, Father's Name, Mother's Name, Date of Birth, Place of Birth, Age (Calculated), Phone Number, Email Id, Address, Educational Qualification, Languages Spoken, License Number, Date of Issue, Valid Upto, Car types which they can drive, Emergency Contact Number, Relationship of emergency contact. Whether they have drinking/smoking habit. The photo and scanned copies of address proof and Aadhar card is also collected.

## Hire a Driver

When a registered customer initiates the booking, the customer details such as Name, Phone No, Email and address is automatically displayed on the screen. If the customer service executives are initiating the booking, the details such as Name, Phone No, Email and Address is collected from the customer. The driver can be hired according to the following services.

- **Local Trips:** To service a radius of 40 kms in and around the city. It could be either round-trip or drop alone. The customer needs to select Chennai or Bangalore as their base city. The Source and Destination areas is then populated automatically in the dropdown list. The drive start time is collected from the customer. The booking is required to be done at least 3 hours prior to the travel.
- **Outstation Trips:** Service is available for outstation round-trips and drops to all major cities in India. To avail this, a customer needs select source and destination city. For round trips, they need to select Start Date and Return Date. Only Start Date needs to be selected for a one-way journey. The start time and the language preference for the driver if any also needs to be collected. The booking needs to be done at least 12 hours before the travel.
- **Permanent Duty:** To Hire a driver for a fixed monthly salary. The customer needs to pay a one-time fee of Rs 2000 to the company for having identified the driver for them. The amount may vary in the future. The Business head should be able to update this when the application in the production. Customer needs to also specify the language preference for the driver if any.

Customer can check the tariff rates for all the above services in the booking page itself on a click of a button.

The Local and Outstation trip booking request is routed to the executives work basket, one of the executives work on the customer booking and select a driver from the list of available drivers as per the preferences. The customer is then notified by mail about the booking confirmation, driver details along with driver photo and OTP is sent to the customer within 15 minutes as per the service level agreement. The customer is also notified in case of non-availability of the driver. In that case, booking is resolved as cancelled.

Once the driver reports to the customer, the driver starts the ride on the said time by asking for the OTP from the customer. The driver records the Kilometer reading when the ride starts. The

ride can be closed by the Driver by entering the OTP again. The start, end time of the ride, closing kilometer is then collected and the tariff is automatically calculated and shown in the screen. The customer makes the Payment either by Cash or Card.

The customer records the feedback about the driver and ride at the end. The feedback screen collect the ratings for the following categories.

- Ease of Booking Process
- Driver Behavior
- Ride Comfort

The ratings are given as follows.

- Excellent- 5
- Good- 4
- Average- 3
- Poor- 2
- Very Poor-2

The customer can give any free from comments also. The bill is then sent to the customer by mail as a PDF attachment. The bill has the customer details, driver details, ride details and tariff details.

The below table specifies the tariff rates. [up to 40 kms]

Hours	Tariff
5 hours round trip	Rs 540
2 hours round trip	Rs 250
Drop alone	Rs 100 + Rs 8 per Kilo meter
For every additional 30 mins	Rs 40
For every additional kilo meter	Rs 10

The below table specifies the tariff rates of outstation rides

Days	Tariff
1-day round trip up to 100 kms	Rs 1700
Drop alone up to 100 kms	Rs 1400
For every additional kilo meter	Rs 12
For every additional day	Rs 300 towards Driver's Expense

Duration more than 3 days from the start date	Accommodation should be arranged for driver or Rs 600 per day should be paid starting from Day 3
---	--

R & R will give 10% discount on every trip which cost above Rs 500. The customer may extend the travel beyond the return date for the outstation rides. But the request has to be raised 24 hours prior. Executives may approve or reject the request. If approved, the tariff will be collected as per the norms for every additional day.

The customer may cancel the booking any time before the ride starts. A cancellation fee of Rs 100 will be then collected from the customer.

For permanent duty drivers, the information such as Driver's age preference, Driver's native language preference, Approximate salary range is collected from the customer. The request is attended by executives who have driver identification skills. They identify the driver and send a mail to the customer regarding their convenient date for meeting the driver (DWA). The driver is informed by mail. After the meeting, customer either hires or rejects the driver. If the driver is hired, the payment of Rs 2000 is collected from the customer. If the driver is rejected, a processing fee of Rs 500 is collected from the driver.

## Feedback Review

The manager sees the list of drivers whose cumulative ratings are below 3. For each driver, Manager organizes one on one session to understand the reason for their poor performance. Manager also sees the free form comments given by the customers for the rides attended by a particular driver.

Based on the data, Manager decides any one of the following actions.

- Recommend some training sessions on road safety and customer management to the driver
- Warn the driver, but encourage to give good performance
- Dismiss the driver [Driver will not be given any further rides]

The mail is sent to the driver accordingly in all the above cases.

## Additional Requirements

- The portal is different depending on the type of actor logged in.

- The customer portal should have links to Hire a Driver, Update Profile, View Previous Rides, and View Tariff rates
  - Driver Portal has My Work, My Rides, Update Profile links
  - Customer care executive's portal needs to have Driver Booking, My Cases, My Worklist
  - Manager Portal needs to have Dashboard, My Work, My Cases, My Reports, and a link to initiate Feedback review case
  - Executives portals needs to have My Cases, My Worklist, GetNextWork Button
  - Business Head Portal needs to have My Dashboard, My Worklist, My Reports and Delegation link to update the tariff rates
- The tariff rates needs to be maintained as reference data and is to be delegated to Business head for updating it as per the changing business conditions
  - Case management has to be followed along with proper naming conventions
  - Necessary privileges and roles need to be defined and used for security purposes.

## Validation Requirements

Validations on UI forms should be handled properly.

- Customer Registration: All are mandatory fields. Email format should be verified. Mobile number should be 10 digits long
- Driver Registration: All are required fields. Email and mobile number validation to be done, License number should be 15 characters long
- Hire a Driver: All are mandatory fields. The booking date cannot be past. For round trips, the return date should be same or after the start date

## Reporting Requirements

Managers and Business head have two reports.

- Monthly Ride Report: The list of rides booked in a month (local vs outstation). Chart needs to be shown
- Profit Report: 20% of the invoice amount is considered as profit from a ride. The sum of profits from all the rides in a year is to be presented in a report



The below report can be prepared for the customer and it can be emailed to the customer.

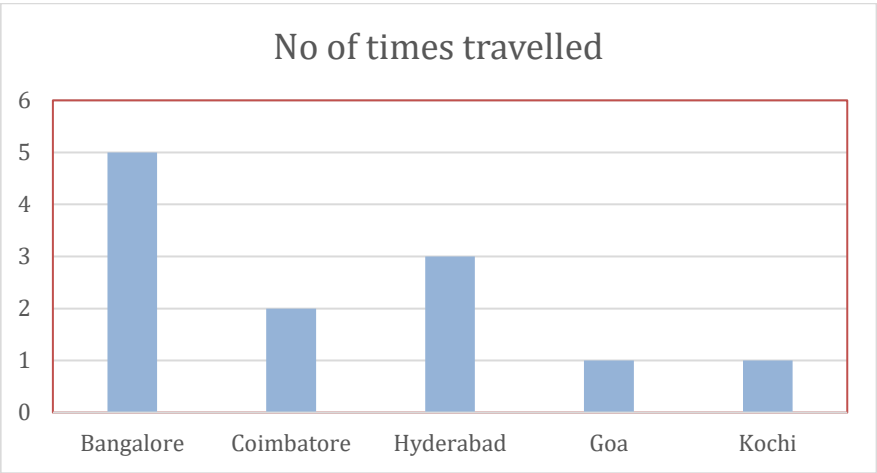
Dear Customer

We would like to present your annual usage report of our Drive Service.

**Cities Explored (Outstation Travels)**



**5 cities visited**

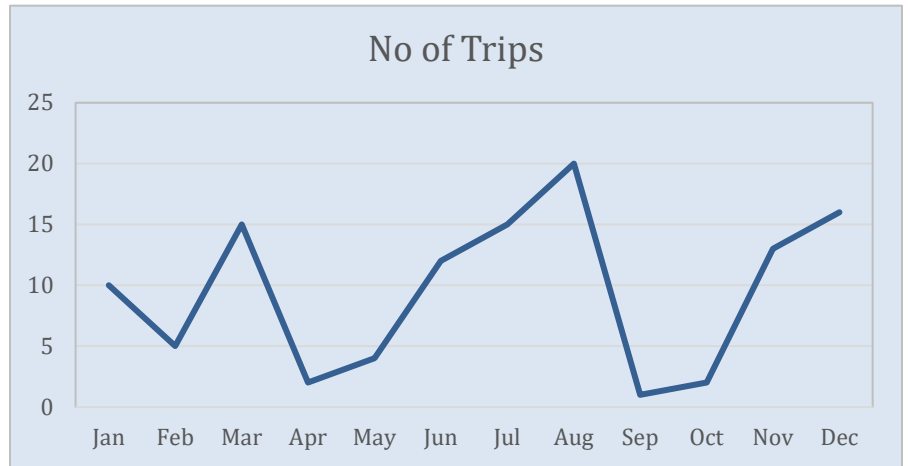


**Local trips per year**





115 trips

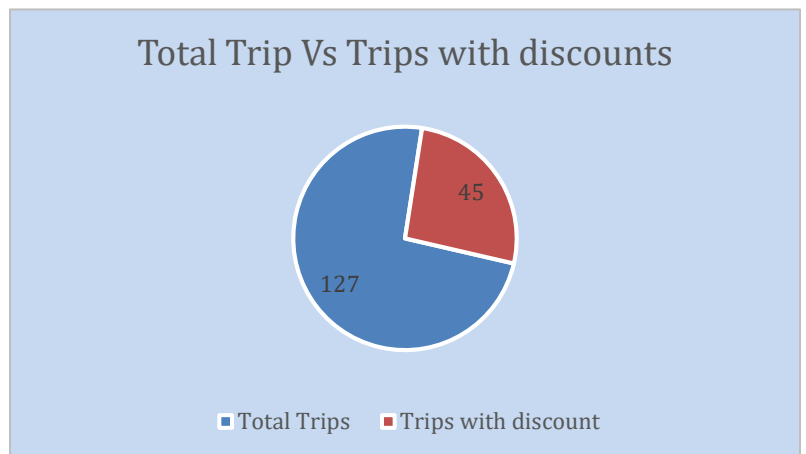


### Discounts Earned



35 % trips are discounted.

You have saved Rs 2800.



**“There is only one boss. The Customer.” - Sam Walton.**

We believe the same. Thank you for being our privileged customer. We hope to serve you more in the coming years.

Regards,  
Vice President (Customer Relations)  
Roads & Rides



## Appendix

### Background Verification REST Web Service

Below is the details and sample JSON response you can expect once **License Number** is sent as parameter.

**Service Name:** RetrieveAccidentHistory

**EndPointURL:**

<http://192.168.56.101:9080/Driver/RetrieveAccidentHistory?LicenseNumber=TNCH20081234567>

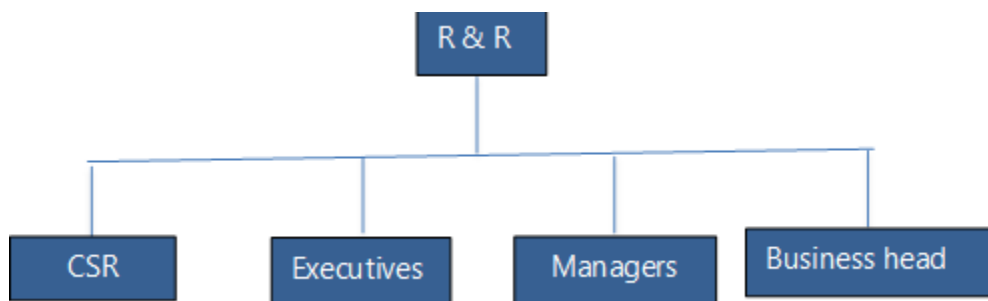
**Query String Parameter:** License Number

**Sample JSON Response:**

```
{"LicenseNumber":"TNCH20081234567","NumberOfAccidents":"5"}
```

### Organizational Structure

R & R organizational structure looks as follows.



Create the following users for testing purposes.

Department	Role	Operator ID
Customers	Customer	sara@gmail.com
Drivers	Driver	Krishna@gmail.com
CSR	Customer Service Executive	CSR1@RR.com
Executive	Executives	Executive1@RR.com
Manager	Manager	Manager@RR.com
Business head	Business head	BusinessHead@RR.com