DIGITAL TOLL PAYMENT COLLECTION SYSTEM

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IDEA:

- We are designing an android application for online toll payment system.

- The basic aim of our app is to reduce the time , pollution and many other problems occurs at the toll plaza.

- There are mainly two main options:
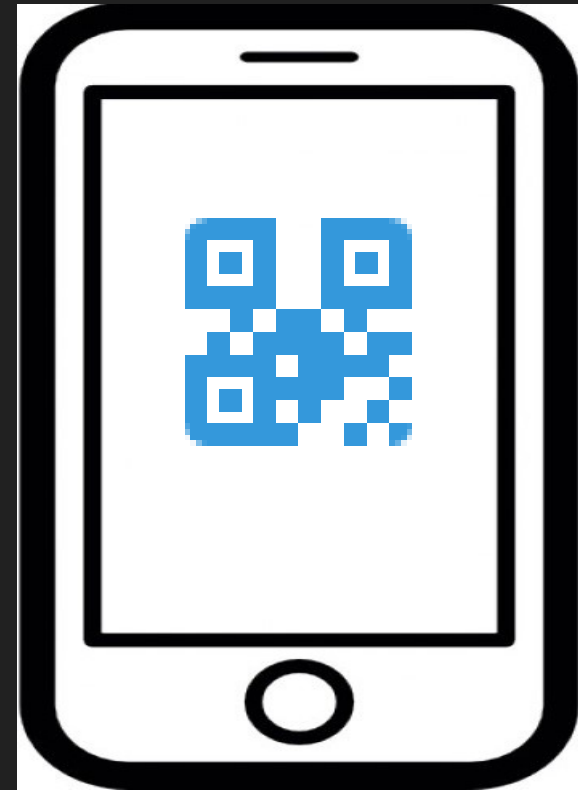
  - 1.Prepayment

  - 2.Postpayement

DESCRIPTION:

- When a new user sign up for a new account, he will have enter his personal details, vehicle details.

- The details will be matched up with the RTO database.

- Payment mode is through e-wallet like PayTm.
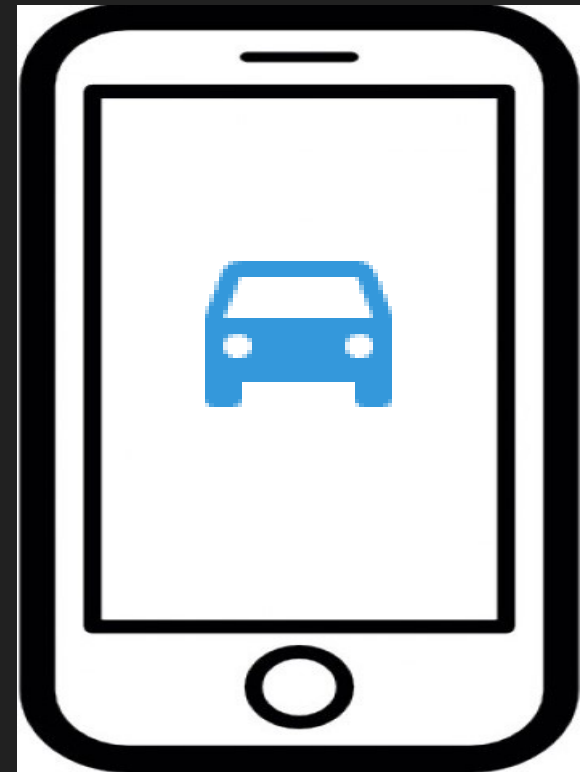
POSTPAYEMENT:

- Notification before 2 Km.
- One touch payment.
- Generation of QR code.
- Scanning of QR code.
- Passing the vehicle at the toll plaza through fast-lane.
- Generation of E-receipt.

PREPAYMENT:

- Pre-payment of multiple tolls.

- Generation of E-receipt.

- At toll plaza: Automatic number plate recognition using Image Processing.

- Validating the user.

- Passing the vehicle at the toll plaza through hot-lane.
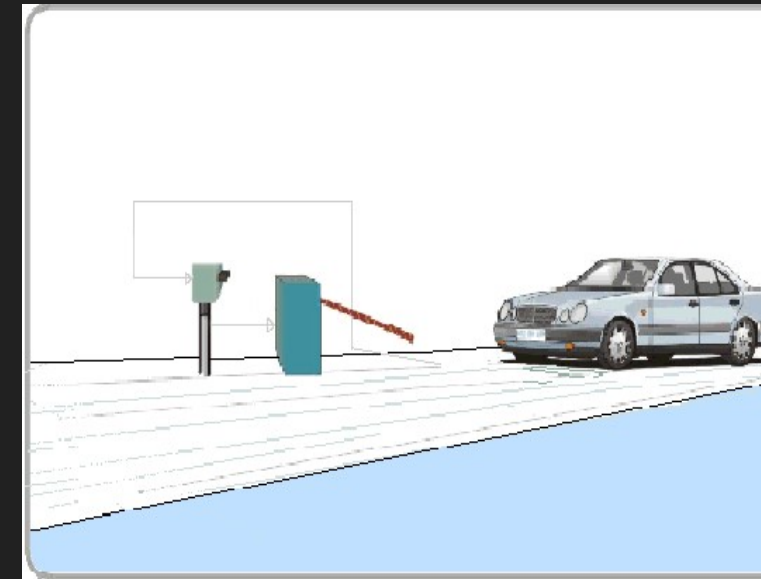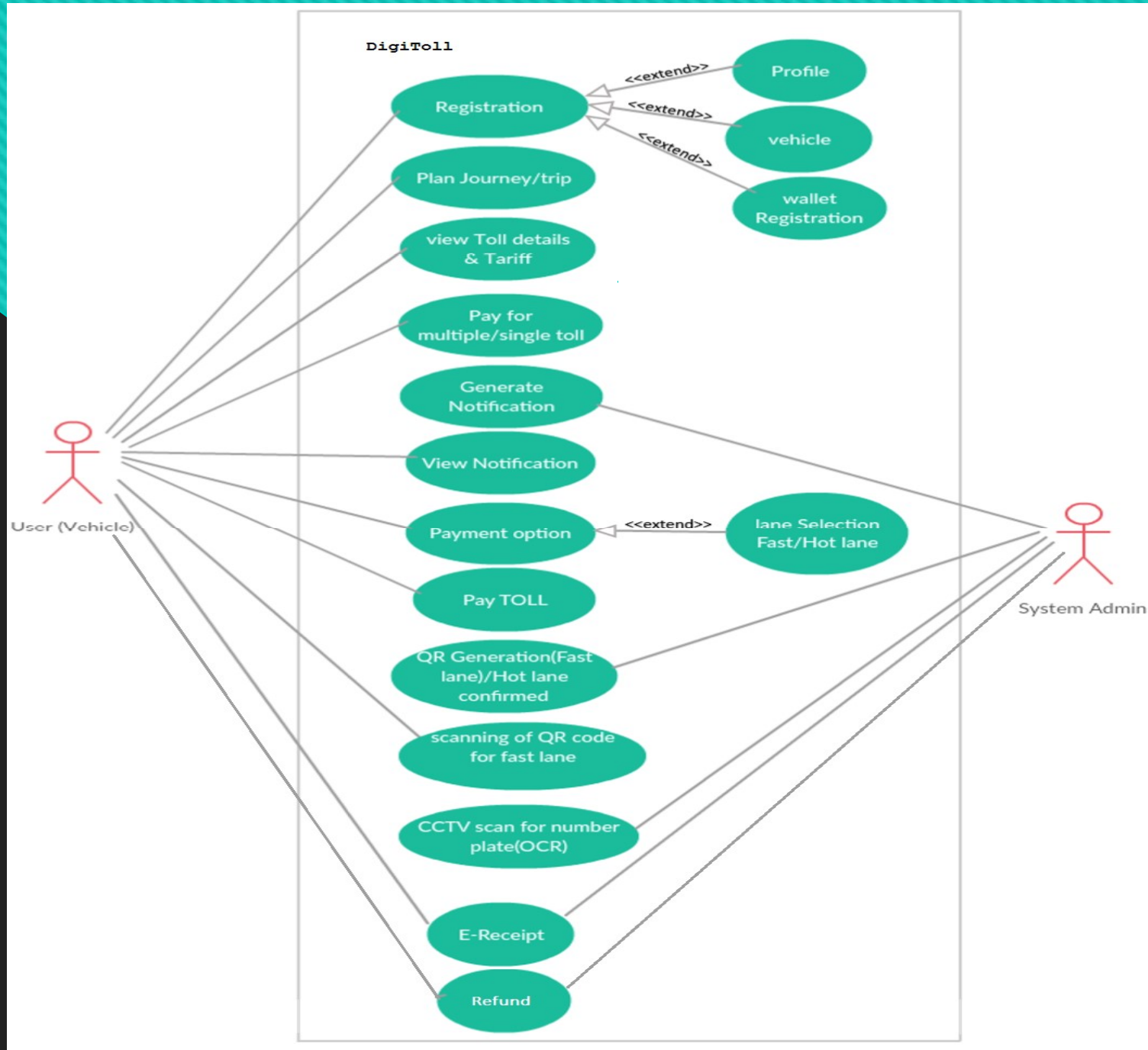
INNOVATIONS:

- Concept of fast-lane(for QR code generation) and hot-lane(for ANPR).
- Notification prior to 2 Km of toll plaza using geofencing concept.
- List of tolls can be seen on app.
- Monthly pass for daily users.
- Prepayment of tolls.
- Payment through e-wallet.
- Crime activities can be controlled.

REVENUE MODEL

- DigiToll promotes cashless economy and digitization.
- Revenue generated through advertisement.
- Initial cost is moderate but less investment in manpower.
- By giving membership option, high revenue can be generated.
- Corruption can be controlled.
- Most of the technologies in technology stack are open source.
- User friendly UI based on android promotes marketing of the app .

REVENUE MODEL

Govt. / Company

Expenditure Yearly	Capex	Opex		Income Yearly	Unit Price	Total No.	Total	Yearly
Payment Gateway		30000		Toll Plaza Collection	10000	6000	60000000	720000000
Google Maps		25200		Implementation (@10% Profit of Total Cost)	10%	6000	127200000	
Salary		1080000						
Server	1000000							
Internet Charges		36000						
Phone		24000						
Rent		240000						
Miscelleneuos		120000						
	1000000	**1555200**						

For Toll Plaza Owner

Assuming Number of Lanes	6

CAPEX	Unit Price	No of Units	Total		OPEX	Unit Price Monthly	Unit	Total Yearly
Camera	25000	6	150000		Internet	1500	1	18000
Server	50000	1	50000		Salary exp.	20000	3	720000
Hardware Unit	2000	6	12000		Govt. /Company Charges	10000	1	120000
Labour	15000	1	15000		Miscelleneuos	10000	1	120000
Miscelleneuos	20000	1	20000					978000
			247000					

Total Saving for toll Plaza Owner

	Unit Price	Total Units	Total Saving Monthly	Total Saving Yearly		Actual Saving Yearly
Salary	15000	15	225000	2700000		1722000

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