Sri Lanka Institute of Information Technology

Assignment 01

MLB_09_01_12

Vehicle Rental System

Software Process Modeling – IT1060

B.Sc. (Hons) in Information Technology

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BSc (Hons) in Information Technology

Assignment 1 Cover Sheet

IT1060 – Software Process Modeling

Semester 2 - 2022

PROJECT ID	MLB_09_01_12
CASE STUDY NAME	Vehicle Rental System
CAMPUS/CENTER	Malabe

Group Details:

	Student Registration Number	Student Name
1	IT21169212	M.A.T.M Wanshathilaka
2	IT21168154	K.K.C Rangana
3	IT21168390	U.N.H Madhuwantha
4	IT21170720	K.D.S.P Jayawickrama
5	IT21168086	V.N Munasinghe

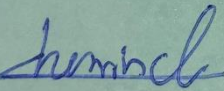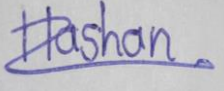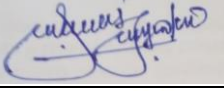We hereby certify,

- ☑ The attached is our own work and no further changes will be made.

- ☑ We have contributed in this assignment to the best of our ability.

And we understand,

- ☑ We may be subject to student discipline processes in the event of an act of academicmisconduct by us including an act of plagiarism or cheating.

Group Details:

	Student Name	Student Registration Number	Date	Signature
1	M.A.T.M Wanshathilaka	IT21169212	22/03/2022	
2	K.K.C Rangana	IT21168154	22/03/2022	
3	U.N.H Madhuwantha	IT21168390	22/03/2022	
4	K.D.S.P Jayawickrama	IT21170720	22/03/2022	
5	V.N Munasinghe	IT21168086	22/03/2022	

• **User Case Diagram**
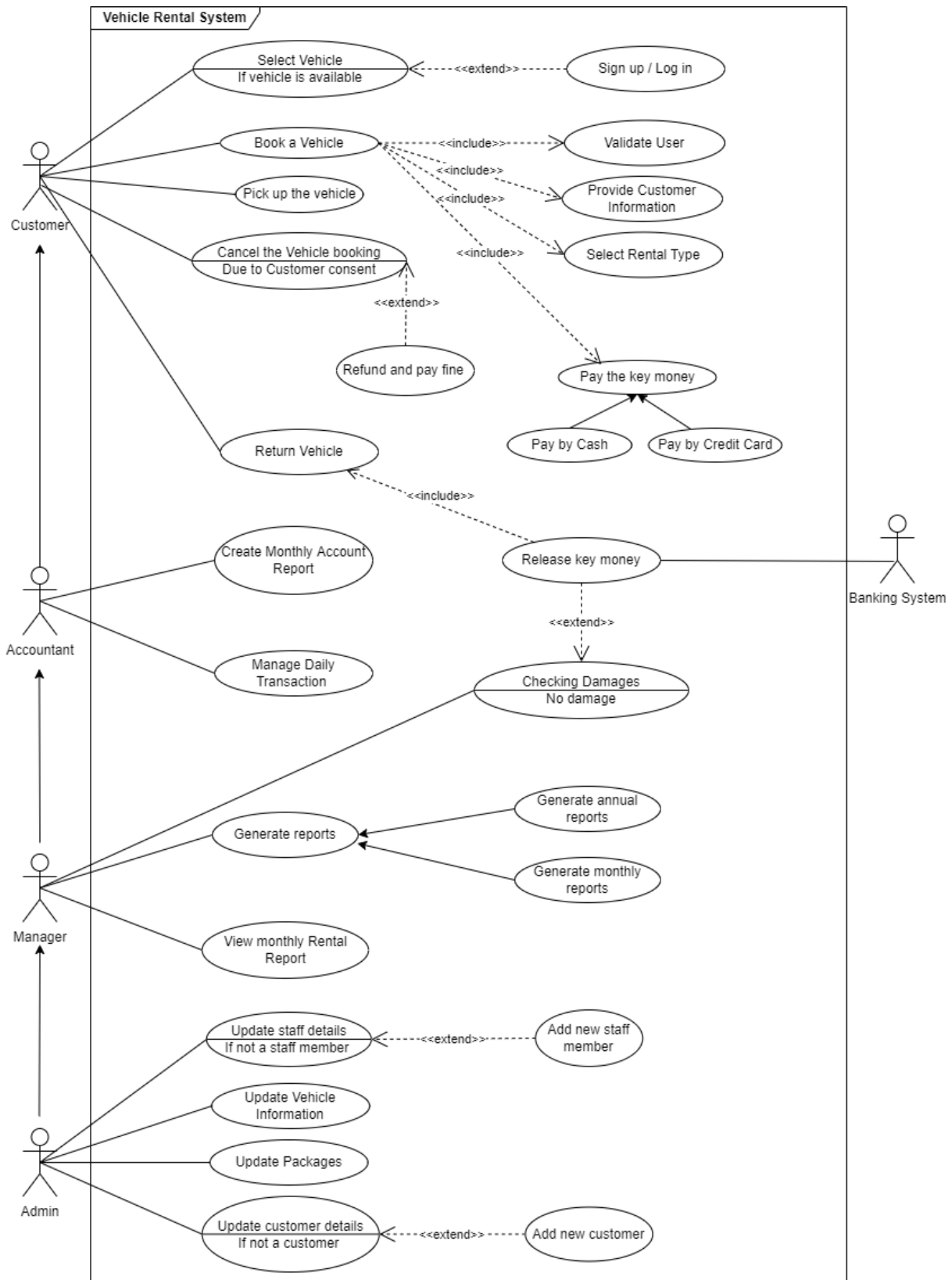
As IT21169212,

1. Sections worked on

- Designed use cases for "Web editor"
- Designed the user case scenario for "Update and register user details"

2. Special Contribution

- I finished my duty as a leader.
- Detect actors and their functions
- Manage members ideas.
- Drew the admin user case scenarios.
- Drew the use case diagram for the admin.
- Making and finishing word document.

3. Challenges faced

- Very first challenge is power cut, we face it in several times.
- It was difficult to manage group members.
- It was hard to find the details about actors.
- It was complex to organize members idea.

Number	VRS-001	
Name	Update staff and user details	
Summary	Add the new staff members and users into system	
Priority	**04**	
Precondition	Log in to system as an administrator	
Post-condition	Add and give permission new user and staff member	
Primary actor(s)	Administrator	
Trigger	Admin chosen to new staff and user registration	
Main scenario	**Step**	**Action**
	1	Go to admin login page in the system
	2	Enter login details
	3	Display the administrator tool page
	4	Administrator select add new staff / user option
	5	Enter new staff / user details into the system
	6	System gets new staff / user details
	7	System updates new staff / user details
	8	Give the relevant permission to new staff / user
	9	Send login details to the new staff / user
	10	
Extensions	**Step**	**Branching action**
	2A	Check and verified administrator login details are in the system
	2B	If not, system notify invalid administrator login
	5A	System check password and username are in the relevant format
	5B	If not, notify admin to password and username not in acceptable format
	5C	System check username and password already in the system
	5E	If it is already in system, notify admin to this user / staff member already in system

IT21168154

1. Sections worked on

- I designed use case of the "Banking System"
- Designed use case scenario for the "Banking System"

2. Special Contribution

- I am grateful to our members for all working together.
- They had the opportunity to share their knowledge with each other
- Sharing our time, labor, resources and working to make the project a success.
- I am doing my part use case diagram is Banking system and use case scenario for banking system

3. Challenges faced

- It was difficult to understand the title and make the relevant notes.
- It was difficult to make time for this with other work.
- I had to work both physically and online.

Number	VRS-002	
Name	Make payment and withdrawal	
Summary	Handling the money of vehicle rental system	
Priority	04	
Precondition	Keep a record of all cash inflow and outflow	
Post-condition	Receiving an account statement	
Primary actor(s)	Banking System	
Trigger	Want to handle money	
Main scenario	Step	Action
	1	Received the make payment request or get payment request from system
	2	Check the purpose of payment
	3	Checking the bank account balance
	4	Record information about the recipient or payer
	5	Accept payment or receipt if the information is valid and in without doubt.
	6	Keep notes about the transaction
	7	Sending notes to accountant
	8	Create monthly account statement
Extensions	Step	Branching action
	2a	System checks about transaction
	3a	Give error message if the account balance is insufficient
	3a	Check the sender and recipient accounts for accuracy.

IT21168390

1. Sections worked on

- Drew use cases for the Customer.

2. Special Contribution

- In-lecture activities and lecture notes were very useful for this.
- Also, I am grateful to all my team members for their valuable contribution and knowledge sharing.

3. Challenges faced

- Defining the scale of the system.
- Building a more practical, applicable, and accurate use case scenario by inter-connecting each one.

Number	VRS-003	
Name	Book a Vehicle	
Summary	User books a chosen vehicle while logging in to the system.	
Priority	5	
Precondition	User has logged in and selected a vehicle	
Post-condition	User has booked the vehicle and picked up the vehicle	
Primary actor(s)	Customer	
Trigger	Customer has chosen a vehicle to rent.	
Main scenario	Step	Action
	1	System validates the user.
	2	System asks for the required information.
	3	Customer provides the necessary information.
	4	Customers select the rental type.
	5	System asks to select an available payment method.
	6	User selects a payment method.
	7	User completes the payment.
Extensions	Step	Branching action
	1a	System asks the customer to register by creating a user account.
	6a	Users cancel the process and exit.

IT21170720

1. Sections worked on

- I designed the usecase of Manager in the vehicle rental system.
- I designed the handle the vehicle rental system.

2. Special Contribution

- I collected information by lecture notes.
- I share my opinion and ideas with my group members.
- I am thankful to my group members for their contribution to this group work.

3. Challenges faced

- When the draw use case diagram, it is difficult to understand and solve that related each other's arguments.
- we faced the power cut situation due to the current country situation.
- The given topic was difficult to understand at the beginning

Number	VRS-004	
Name	Handle the Vehicle rental system report	
Summary	Give the correct information about the system reports	
Priority	**02**	
Precondition	Manager checks all customer details in the system and updates it	
Post-condition	Achieve the month end task	
Primary actor(s)	Manager	
Trigger	Manage the system proper type.	
Main scenario	**Step**	**Action**
	1	Make the group meeting with team members
	2	Check and discuss with members what they do to develop vehicle rental system
	3	Get the monthly rental report
	4	Monthly rental report checks and send the accountant to Create monthly account report
	5	Generate reports and make the final profit
	6	Report to the chief executive officer
	7	
	8	
	9	
	10	
Extensions	**Step**	**Branching action**
	2a	Get the vehicle itineraries and check its errors
	3a	Get daily reports separately and get the monthly report so far all of vehicles
	4a	Some problems with system generated report and make those problems
	6a	If some vehicle reservations are cancelled, and manager must inform the Chief executive officer and upload it To the system

IT21168086

1. Sections worked on

- Design use cases for the actor "Accountant"
- Design use case scenarios for the "Generate monthly report" and "Manage daily transactions"

2. Special Contribution

- Make use case scenario for relevant actor and draw diagram with my group members.

3. Challenges faced

- Hard to thinks how to flow use case diagram
- go into late for choose right flowing path in system
- Difficult to find details

Number	VRS-005
Name	Create Monthly account report
Summary	3
Priority	Using system accountant generate monthly, yearly or date wise
Precondition	-
Post-condition	-
Primary actor(s)	Accountant
Trigger	-

Main scenario	Step	Action
	1	System asks credential logging to system
	2	Accountant enter credentials
	3	Display Dashboard and login id and name
	4	Request monthly income report
	5	System calculates requested monthly income and display report
	6	Request monthly expenses
	7	System calculates requested monthly expenses and display report
	8	Request monthly revenue report
	9	System calculates requested monthly revenue report and display
	10	Leave from this option
Extensions	Step	Branching action
	2a	Enter current username or password
	4a	Select correct date range

Number	VRS-005	
Name	Manage Daily Transaction	
Summary	Daily check income and expenses	
Priority	10	
Precondition	-	
Post-condition	-	
Primary actor(s)	Accountant	
Trigger	-	
Main scenario	**Step**	**Action**
	1	System asks credential logging to system
	2	Accountant enter credentials
	3	Display Dashboard and login id and name
	4	Request daily expenses
	5	Calculate requested day expenses
	6	Display expenses report
	7	Calculate requested day income
	8	Display income report
	9	Leve from this option
	10	
Extensions	**Step**	**Branching action**