Faculty of Computing and Informatics (FCI)

Multimedia University Cyberjaya

CSN6244 – Software Requirement Engineering

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Campus Event Check-in System with Student ID
and Payment Integration
(Project Part 1 - Task 2)

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1. Introduction

In software requirements engineering, understanding the environment in which the system operates is essential. This involves identifying **context objects** (the key components and entities involved in the system) and the **sources of requirements** (stakeholders or systems that provide relevant information or needs).

For our project, Campus Event Check-in System with Student ID and Payment Integration, context objects help us understand the critical elements the system interacts with. Meanwhile, requirement sources help trace where each requirement originates, ensuring that all system functionalities align with user and stakeholder expectations.

2. Context Objects

No	Context Object	Type	Explanation
1	Student	material	The primary user who registers for events, purchases tickets, receives notifications, and checks in using student ID or digital ticket.
2	Administrator	material	To manage and oversee the system's backend operations
3	Event	immaterial	Represents campus activities created by organizers. Each event has a name, date, time, location, ticket type, and capacity limit.
4	Student ID System	immaterial	The university's identity system used to authenticate students during login and check-in. Ensures secure and verified access.
5	Digital Ticket	immaterial	A QR code or barcode automatically generated after successful registration/payment. Used for check-in validation at event entrances.
6	Check-in Log	immaterial	Records student attendance data, including check-in/check-out timestamps and payment status, used for reporting and analysis.
7	Notification System	immaterial	Sends automated emails for confirmations, reminders, and updates (e.g. ticket purchase, event changes).
8	Payment Gateway	immaterial	An external system (e.g. iPay88) that allows students to pay for event tickets via credit/debit cards or mobile wallets.
9	Event Database	immaterial	Stores all event details, organizer info, registration records, ticket settings, and historical logs for tracking and auditing.

3. Requirements Sources

No	Object	Sources (Type)	Explanation
1	Student	University records (Stakeholder)	The student provides personal data and interacts with the system to register, check-in, and pay.
2	Administrator	System admin manual (Stakeholder)	The administrator oversees backend processes and ensures proper system functioning.
3	Event	Event organizers (Stakeholder)	Organizers provide the event details such as time, venue, and capacity.
4	Student ID System	University IT department (System)	The IT system authenticates student identity for secure access and check-in.
5	Digital Ticket	Ticketing module (System)	The system generates digital tickets after student registration and payment.
6	Check-in Log	Event monitoring system (System)	The system records student attendance, check-in/out times, and payment statuses.
7	Notification System	Automated messaging system (System)	Sends updates, reminders, and confirmations to students regarding their registrations.
8	Payment Gateway	Third-party payment provider (System)	An external service (e.g., iPay88) processes credit/debit card and e-wallet transactions.
9	Event Database	Event management system (System)	Stores event data and student interaction logs for reporting, monitoring, and audits.
10	Event Guideline	Event SOP (Document)	A standard operating procedure document that outlines the rules and policies for creating and managing campus events (e.g., time limits, approval steps, venue rules).

4. Conclusion

In this task, we identified and documented the key context objects and the sources from which system requirements originate. These components form the foundation of our understanding for the system environment, helping us to ensure that our system design meets the functional and non-functional expectations of users and stakeholders. This clarity allows more accurate and effective requirement elicitation, analysis, and validation.