

Faculty of Computing and Informatics (FCI)

Multimedia University Cyberjaya

**CSN6244 – Software Requirement Engineering**

**Trimester 2510**

**Group Number: G09**

**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.