IS204.3 – Business Process Management

Group Assignment

Attendance Management System

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Group 5

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Introduction

NSBM Green University

As the first green university in South Asia, NSBM Green University serves as a role model for the region. environmental sustainability's path. The institution welcomes both international and there is a large foreign student community, and a new chapter in Sri Lankan history education. The establishment of NSBM Green University it is a department of the Ministry of Education. world-class academic reputation offerings. The university here is cutting-edge. offers both domestically and abroad an acknowledged, UGC-approved degree programs in home and abroad in four departments: business, computer science, Engineering, science, and graduate programs Studies.

Business Process -Marking attendance at NSBM

Systems for automating, streamlining, and managing various business processes at NSBM Green University are known as business process management systems. These systems are crucial for increasing productivity, precision, and openness across a range of university functions.

Attendance marking system of the NSBM Green University's five primary business process management systems are,

- ✓ **Attendance Monitoring System:** This system aids in managing and tracking student attendance, keeping an eye on their participation, and examining attendance trends.
- ✓ **Payment Management System:** This system makes it easier for the institution to efficiently process, monitor, and manage financial transactions involving tuition, course fees, penalties, gifts, and other payments.
- ✓ **Learning Management System:** To manage, deliver, and track educational content and activities, this platform offers a thorough and unified solution.
- ✓ **The student portal:** Students have consolidated access to a variety of academic, administrative, and personal resources and services through this web-based platform.
- ✓ **The Notification and Communication System:** This tool makes it easier for different university stakeholders to communicate effectively and on time.

These systems are essential to achieving the university's goals of offering its faculty and students opportunities for high-quality education and research.

Process discovery methods

- ✓ **Process interview:** Conducted interview with the staff members related to the QR generating in the attendance marking process. Through interview it helped to identify the steps involved in the process, the roles and responsibilities of different staff members, how the system works, and the challenges and opportunities for improvement.

- ✓ **Document review:** Referring to the previous e-mails sent via the system to the students, through this the procedures and the steps are reviewed and discovered.
- ✓ **Process observation:** The attendance marking process was observed in action during lecture time. This observation helped to identify the actual steps that are taken by instructors when marking attendance, as well as any areas where the process is inefficient and need to be improved.

Qualitative process activities

During this analysis, we categorized our list of activities as value added and non-value-added activities and we minimized the non-value-added activities this analysis is aligned with lean concepts.

Value-added activities are those that directly advance the objective, enhance the value of the good or service, and are essential to reaching the desired result in a corporate or educational context. Activities that do not add value to the final product and may be deemed inefficient in terms of time, resources, and efficiency are referred to as non-value-added activities.

List of activities

- ✓ Student id marked – value added activity.

  It is necessary to monitor each student's attendance individually.

- ✓ Update student data -– value added activity.

  It is important to update student data to have correct and current records.

- ✓ Generate QR -– value added activity.

  When creating QR codes is a step in the process of effectively tracking attendance, it adds value.

- ✓ Send OR –nonvalue added.

  It's like forwarding the QR from one person to another.

- ✓ Receive QR -– value added activity.

  Getting QR codes is useful as it makes keeping track of attendance easier.

- ✓ Display QR -– value added activity.

  The ability for students to access and utilize QR codes for attendance purposes makes displaying them a value-added activity.

- ✓ Scan QR -– value added activity.

  Since scanning QR codes is a prerequisite for keeping track of attendance, it is seen as value-added.

- ✓ Enter student details– value added activity.

  Since student information is required to maintain attendance, entering data like name or ID is a value-added activity.

- ✓ Check details – value-added activity.

  Verifying student information might bring value depending on the situation. To guarantee accurate attendance records, it can be required.

- ✓ Display message – value added activity.
- ✓ If a message offers students or users relevant information, such as attendance confirmation, then it might be deemed as value-added.
- ✓ Check details – value-added activity.
- ✓ Attendance not marked message – value-added activity.

  As it gives students feedback, sending a message to confirm that attendance has been recorded adds value to the activity.

- ✓ Attendance marked message – value added activity.
- ✓ Generate email – value-added activity.

  When creating emails for attendance-related purposes—like delivering notifications or reports—it might be a valuable addition.

In conclusion, we identified all the other activities as value-added activities except send QR since it is similar to forwarding the QR from one person to another. therefore, we divide waste into two parts pure waste and incidental waste, we assumed that send qr is an incidental waste because even though it generates waste the organization must keep the task because without this activity the bp cannot carry out the processes.

As – is Process Model

The "As-Is" model, sometimes referred to as a "As-Is Process Model" or "Current State Model," is a depiction of the organization's current or existing processes, systems, and operations. Before any adjustments, enhancements, or optimizations are done, it offers a picture of how things currently stand inside an organization. To comprehend the current situation, As-Is models are commonly used in business process analysis, process optimization, and systems analysis.
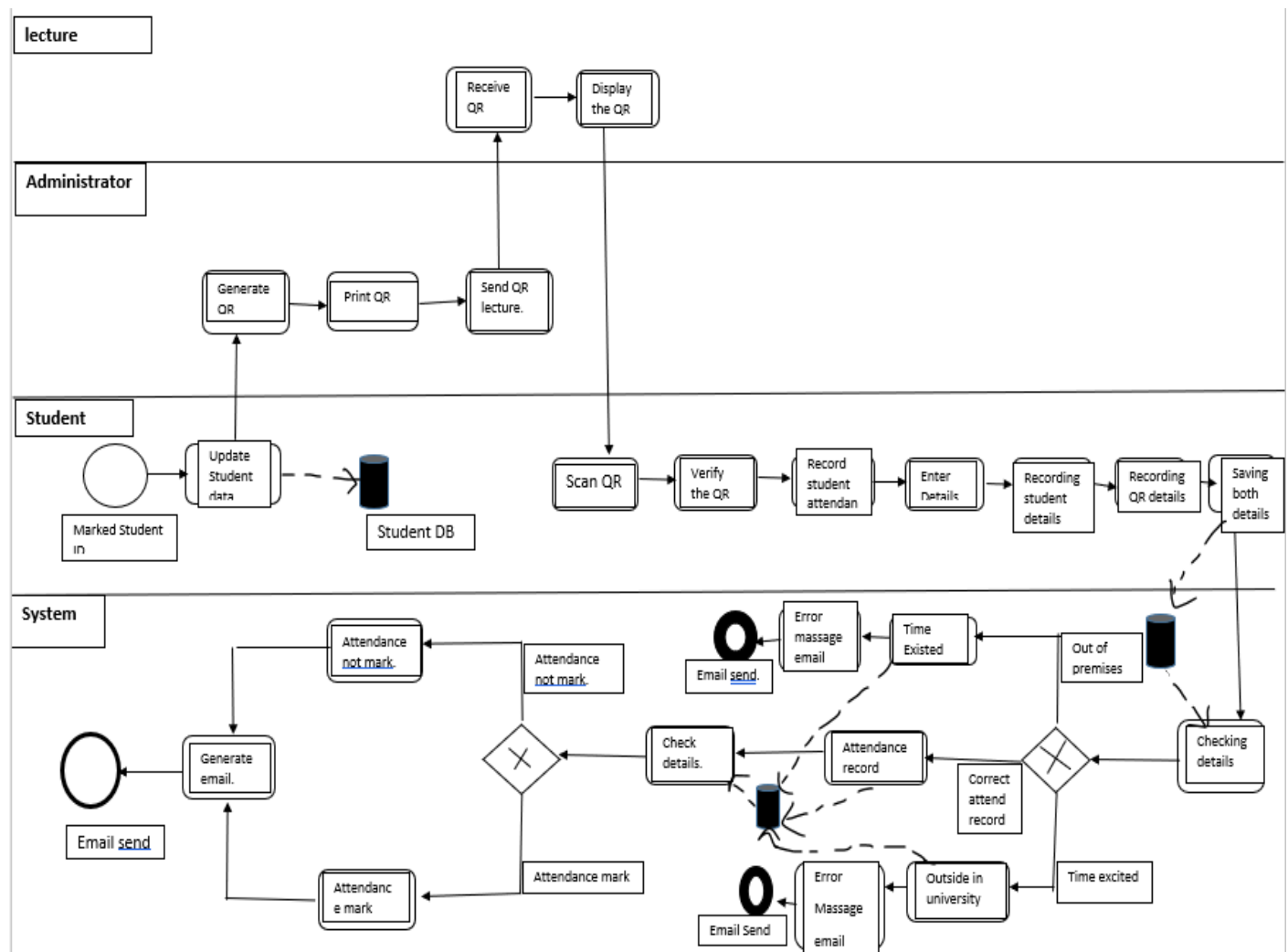
Issues and the suggested improvements

Main issue:

- When the student marks the QR, an email will be issued from that location, regardless of whether the student is on campus.

- A message will be sent to the student when the student marks the QR, whether they are on campus or not if the time is up.

- If the student arrivers on campus and marks the QR, an email will be sent stating "Attendance Mark".

  However, even if these three incidents happen, a mail will be sent to the student.

Suggestion:

- ✓ Considering the above-mentioned issues a mail will come whether the arrival is marked or not. As a solution to prevent that, a solution is set up. If you scan the QR cord after coming to the campus, an email will be created and the email will be sent only to that student.

Additionally, issues and suggested improvement:

1. **Issue:** Arrival of absentee E-mails in other module

Suggested improvement: After checking whether the database containing the information related to each student is updated correctly, sending a mail asking whether attendance is marked only for the module related to the student.

2. **Issue**: Inaccurate attendance data is a common issue in the Attendance Marking Systems. There are several factors that affects the inaccuracy, they are.

- ✓ Human error: Students may enter the wrong information when marking their attendance.
- ✓ Technical issues: QR code scanners may malfunction, or the attendance marking software may experience glitches and latency.

Inaccurate attendance data can have a few negative consequences. For example, students who are present may be marked as absent and some students those who has marked attendance still receives non-attendance mail. This can lead to students receiving incorrect grades, disciplinary action, attendance penalties. Also, inaccurate attendance data can make it difficult for administrators to track student progress and identify students who are struggling.

List of issues

- ✓ A student may enter the wrong information when marking their attendance, such as typing in the wrong student ID number.
- ✓ A QR code scanner may malfunction if it is not properly maintained or if the QR code is damaged.
- ✓ The attendance marking software may experience a glitch that prevents it from accurately recording attendance data.

Suggested improvements

- ✓ Regularly reviewing attendance data for errors and inconsistencies. This can be done manually or by using automated software.
- ✓ Using password protection or biometrics to authenticate students to mark the attendance to minimize the possibilities of entering wrong IDs and names.
- ✓ Monitoring the cost of the attendance marking system to ensure that it is cost-effective.

3.Issue: A slow attendance marking process in attendance marking system.

- ✓ Slow QR code scanners: If the QR code scanners are not powerful enough, it can take longer for them to scan the QR codes due to Wi-Fi issues.
- ✓ Network congestion: If the network is congested, it can take longer for the attendance data to be transmitted to the database.
- ✓ Large student number: When there are many students in the class, it can take longer to mark attendance for all students.
- ✓ Human error: Students do not scan their QR codes correctly, or if the teacher does not display the QR code correctly may lead to delays in the attendance marking process. Due to the time exceeding.

Slow attendance marking process produces reduced instructional time when the lecturers take a long time to mark attendance, it reduces the amount of time that is available for instruction. Students and lecturers may get frustrated due to the slow attendance marking process, this can be frustrating for both students and lectures. Students may become restless and disruptive and they

Inaccurate attendance data: If the attendance marking process is slow, there is a greater risk of errors occurring. For example, a student may accidentally scan their QR code twice.

Suggested improvements

- ✓ Use high-quality QR codes: Make sure that the QR codes are printed or displayed clearly using high-quality materials.
- ✓ Improve network performance: Upgrade the university network infrastructure to improve performance and reduce congestion.

4.Issue: The cost of implementation and maintenance of the Attendance marking system

- ✓ Cost of integration: When the QR code attendance marking system is integrated with the University's existing student information system, there may be additional costs associated with the integration process. Also, it may take lot of storage for the data storing, for this the university may need to buy high paid database software's.
- ✓ Cost of maintenance: The cost of maintaining a QR code attendance marking system will vary depending on the complexity of the system and the frequency of updates.
- ✓ There are also a few indirect costs associated with implementing and maintaining a QR code attendance marking system. These indirect costs may include the cost of training staff and students on how to use the system also it may take the cost of troubleshooting the problems that may arise, and the cost of lost productivity if the system is down.

By using the QR code attendance marking systems can offer a few advantages over traditional attendance marking methods of reducing paper-based attendance sheets. QR code systems are more efficient, accurate, and secure. They also provide real-time feedback on student attendance, which can help teachers to identify students who are struggling and to provide them with the support they need.

Suggested Improvements

- ✓ Regularly back up the attendance data using a high paid database.
- ✓ Have a plan in place for troubleshooting problems with the QR code attendance marking system.
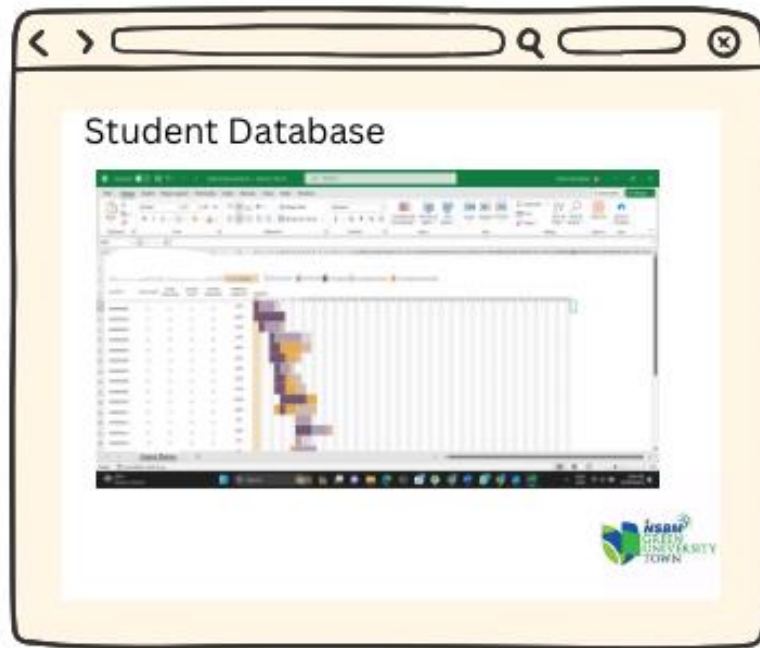
To – be Process Model

A "To-Be" model, also known as a "Future State Model," is a representation of how an organization expects its systems, processes, and activities to function in the future after making the desired improvements or adjustments. The goal of this model is to define the ideal state or the aim f
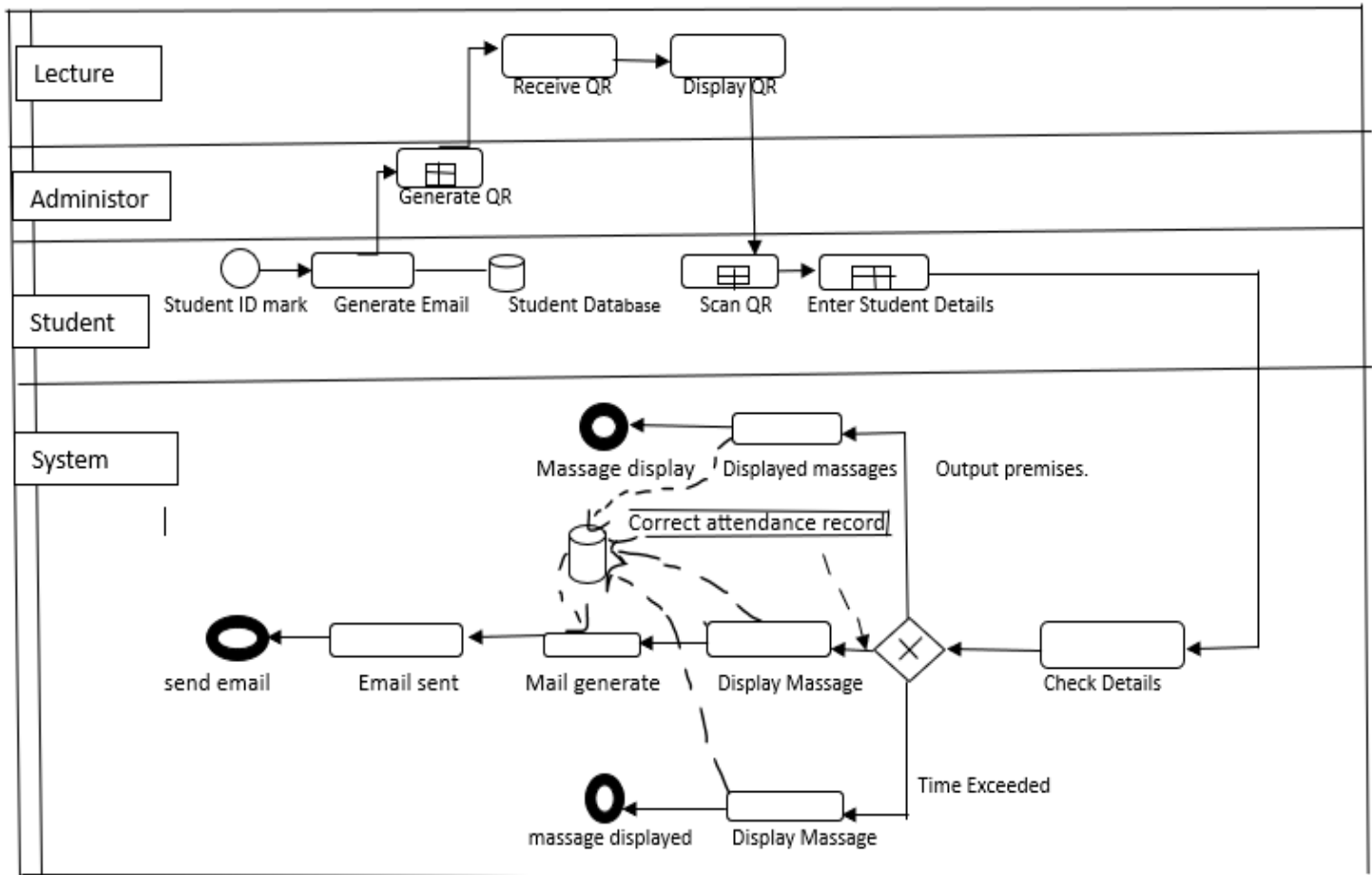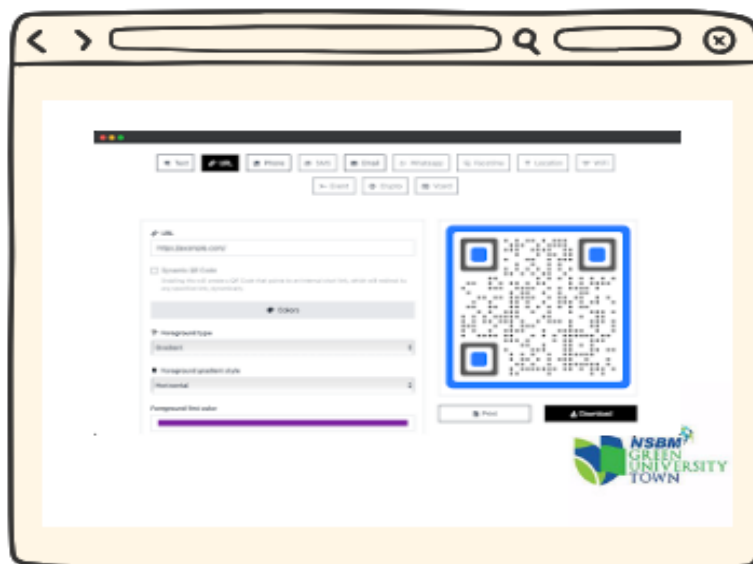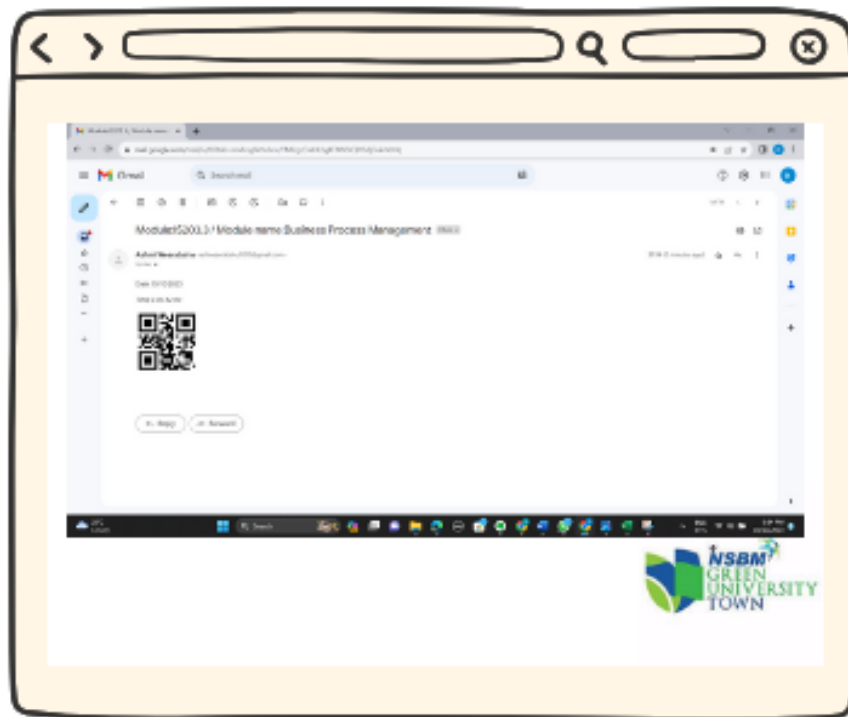
System Prototype

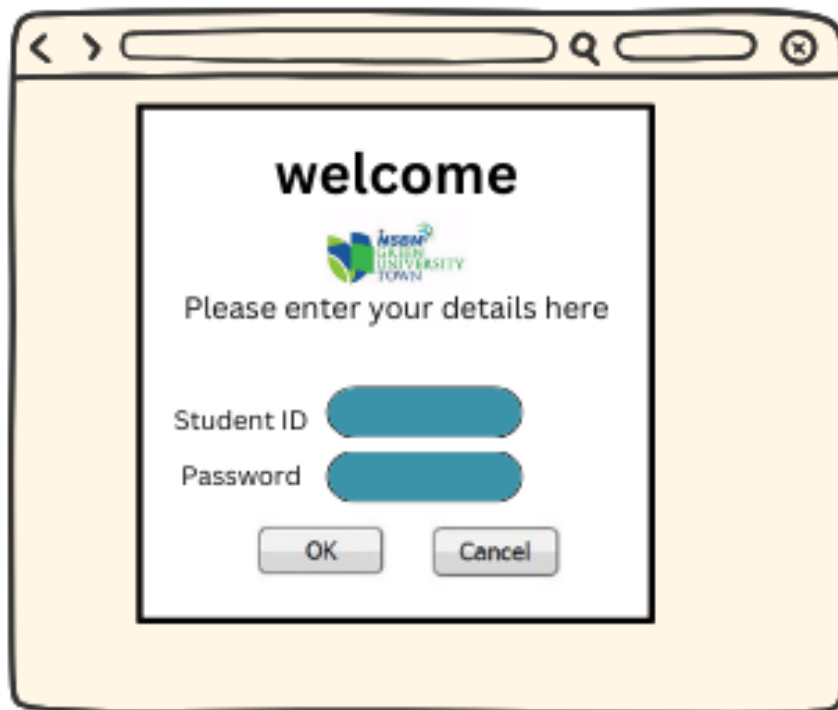## 1.Student data recoding

1. Generate QR

2. Receive QR

3. Scan QR

Please scan the QR.

Module:IS203.3
Module name:Business Process Management
Lecturer:Chalani Oruthotaarachchi
Date:10/10/2023
Time:9.00-12.00

4. Entering student details

welcome

Please enter your details here

Student ID

Password

OK   Cancel

5. QR marked message

Thank You!
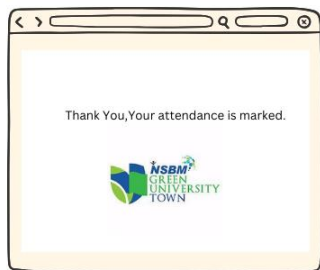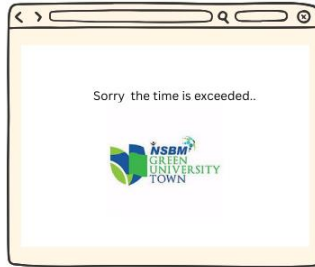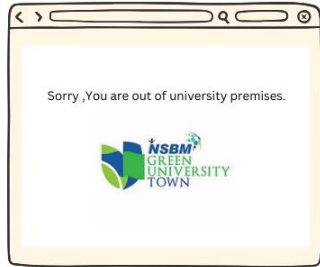
NSBM
GREEN
UNIVERSITY
TOWN

Your details are recorded.

6. Update attendance data
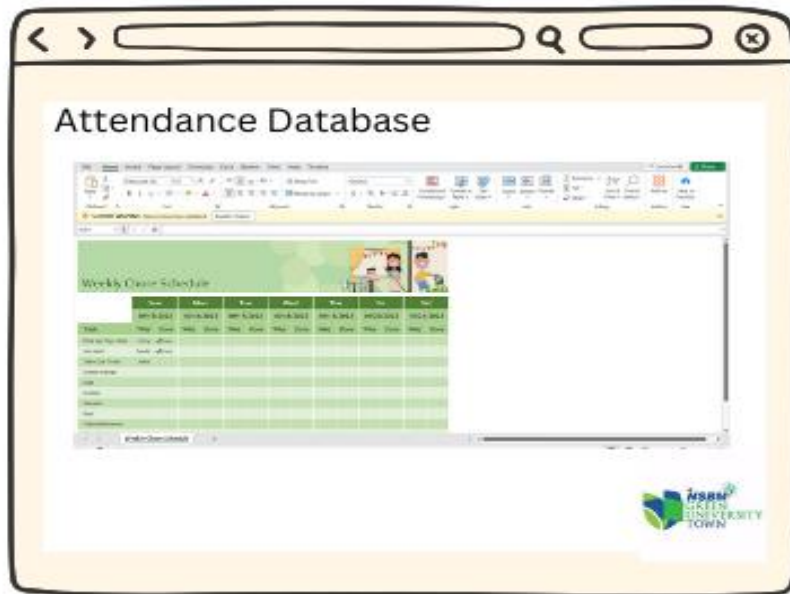
7. Check details
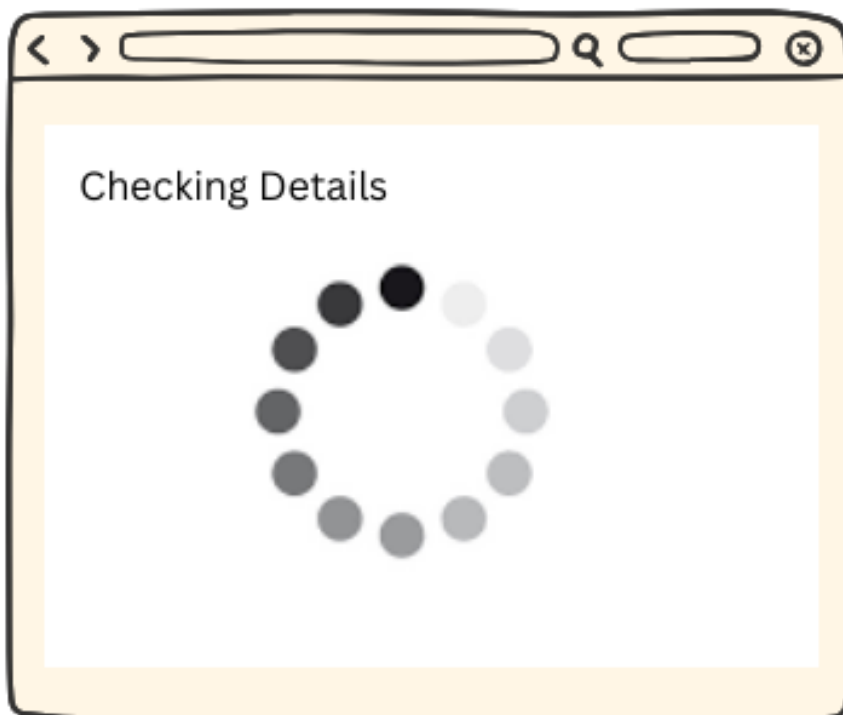
8. Recoded message/Out of premises message/Time exceeded message

Sorry ,You are out of university premises.

Sorry the time is exceeded..

Thank You,Your attendance is marked.

9. Checking details

Checking Details

10.Generate mail

11.Sending mail