



# Evaluation of NMU Shuttle Service System

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## Shuttle Service Transportation System

The Shuttle Service System is a system designed for students living off-Campus to book transportation to and from University Campus. The goal of this system is to manage shuttle system service by providing a way for students to book themselves a shuttle, real-time tracking, and align transportation with student classes. The student don't have to book transportation most of the time as the University provides transportation, but the transportation service has its own problems and is limited.

### Questionnaire

1. How often do you use the booking system?
  - ☐ Daily
  - ☐ Several times a week
  - ☐ Occasionally
  - ☐ Never
2. What time do you usually use the shuttle service?
  - ☐ Morning Express (06h45-09h45)
  - ☐ Afternoon Express (13h00-22h00)
  - ☐ Other \_\_\_\_\_
3. How did you first find out about the system?
  - ☐ University Memo emails
  - ☐ Other students
  - ☐ I wasn't aware of it
4. What do you use to travel to campus when not using the shuttle?
  - ☐ Taxi
  - ☐ Walk
  - ☐ Bike
  - ☐ Personal transport
  - ☐ I don't go to campus
5. Have you used the shuttle system service before? If not, why?  

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6. What challenges do you face when booking a shuttle?  

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7. What features would make the booking process easier for you?  

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8. How often do you miss the shuttle due to early departures or it being full?
  - ☐ Always
  - ☐ Rarely
  - ☐ Sometimes

9. Do you feel that shuttle availability matches your class schedule and other commitments like your events, church and others?
    - Yes
    - No
  10. What improvements would you like to see in shuttle notifications or tracking and availability?
    - Easier login process
    - Increased numbers of shuttles
    - Shuttle times must match class schedule
  11. Do you feel that live tracking and notification would be helpful for you?
    - Yes
    - No
  12. Do you have any additional suggestions for improving the booking system?
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## Tabulated results of the interview

While Interviewing a few students I have observed their interactions with the existing system. I watched any changes and frustrations they had while using the system and after I have conducted the interview's I tabulated the results. Below is the sample table of the resulting feedback.

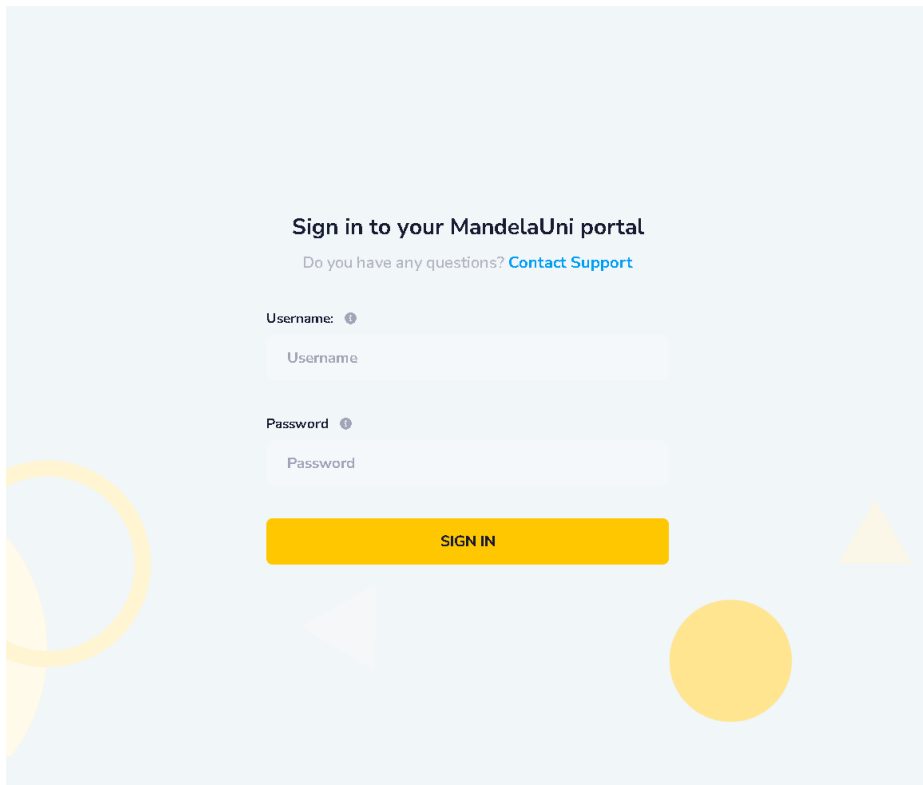
Student	Year of Study	Shuttle use frequency	System awareness	Challenges faced	Preferred improvements	Is the system easy to use
Student 1	Second Year	2 to 3 times a week	Low	Unaware of the system	More Shuttles, notifications	No
Student 2	First Year	Weekly	low	Shuttle is always full, logging in is frustrating	Promotion of the system, more visibility and easy logging in to system	No
Student 3	Third Year	3 times a week	average	Often left behind, login system not helpful	More frequent shuttles, simplified login	No
Student 4	Third year	daily	high	Shuttle time schedule does not match class schedule	Sync class schedule, Midday shuttles	Yes

### **Analysis of the interview results**

1. Login frustrations
  - Students have expressed that the login process is frustrating and unhelpful. The system does not help with login issues.
  - I have noted a strong demand for easier and simplified login
2. People were unaware of the system
  - Students are unaware of the system especially the first years. Most seniors are aware of it.
  - A promotion of the system is necessary.
3. Shuttle Wait and departure time
  - Another issue was that even when the shuttle is full, it will wait until departure time causing delays in for students who could have left early.
4. Class schedule clash
  - Many students reported that the shuttle schedule does not align with their class timings. This causes students to arrive way too early for their classes or they can miss the shuttle, and they will have to use a Taxi.
5. No shuttles between 09h45 – 13h00
  - This gap in shuttle services causes difficulties for students as it was mentioned frequently.
  - There's an increase in demand for more shuttles.

## Old Interface of the system

Frame 1



Sign in to your MandelaUni portal

Do you have any questions? [Contact Support](#)

Username: ⓘ

Username

Password ⓘ

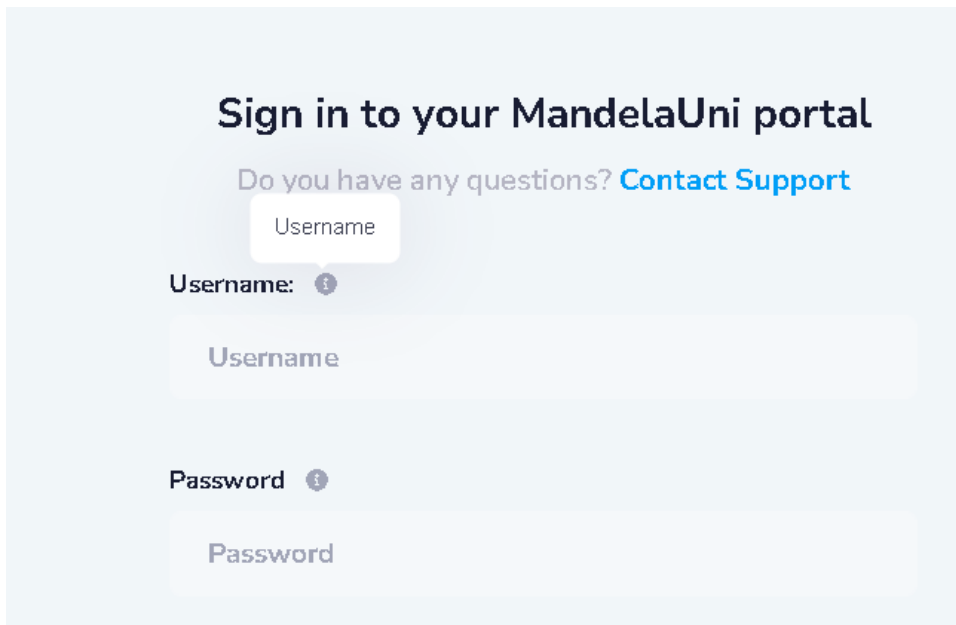
Password

SIGN IN

Frame 1 shows a login form for the MandelaUni portal. The form is centered on a light blue background with decorative yellow geometric shapes (circles and triangles) on the left and right. The title 'Sign in to your MandelaUni portal' is in bold black text. Below it is a link 'Do you have any questions? Contact Support' in blue. The form consists of two input fields: 'Username' and 'Password', each preceded by a label and an information icon (a circle with an 'i'). The 'Username' field is highlighted with a yellow border. Below the input fields is a yellow 'SIGN IN' button.

The login frame looks simple.

Frame 2:



Sign in to your MandelaUni portal

Do you have any questions? [Contact Support](#)

Username

Username: ⓘ

Username

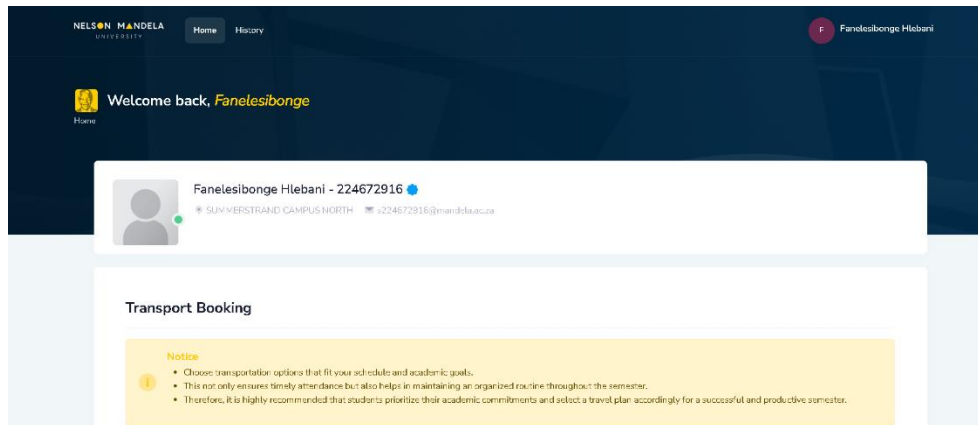
Password ⓘ

Password

Frame 2 shows the same login form as Frame 1, but with a focus on the 'Username' field. The 'Username' label and the 'Username' input field are highlighted with a yellow border. The 'Password' field and the 'SIGN IN' button are not visible in this frame.

The “i” is supposed to provide tips in assisting the user to use the correct credentials in filling in the username and password but instead it repeats the username and password. This makes it hard and frustrating for the students to know which credentials to use when logging in the system. The shuttle service system makes use of the student pin not the password.

## Frame 3:



After a successful Sign-in, you're met with a nice welcome page, with your name and student number.

## Frame 4:

The screenshot shows the 'Transport Booking' form. It includes a yellow notice box with the same text as in Frame 3. Below the notice, there are two main sections:

- Morning Trip** (Morning Trip Booking)
  - Morning Location & Time** (Select your morning transportation pick-up location and time!)
    - Pick-up Location:
    - Trip Allocated Times:
    - Drop-off Location:
- Afternoon Trip** (Afternoon Trip Booking)

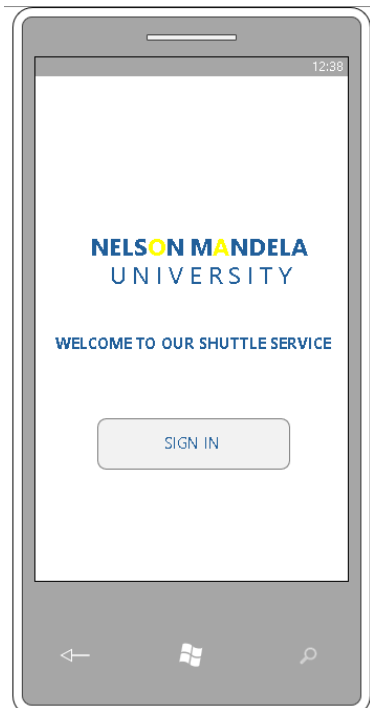
A blue 'Continue' button is located at the bottom right of the form.

When booking there only fixed times available from 06h45- 09h45 and 13h00-22h00 ( for returning students) there's a high chance of getting left behind because of a full Shuttles or early departure before time.

When you have done a booking in this old system only an email confirmation is sent, no follow up and there's no way that you can track the shuttle. No availability of Shuttle is shown in this system except for an email coming from the school alerting of of the unavailability of Shuttles.

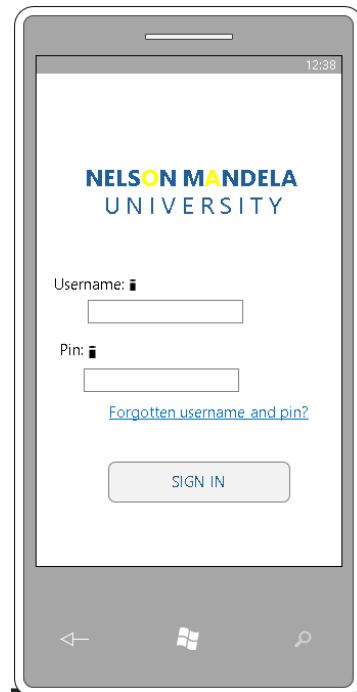
## STORYBOARD OF THE IMPROVED INTERFACE

Frame 0



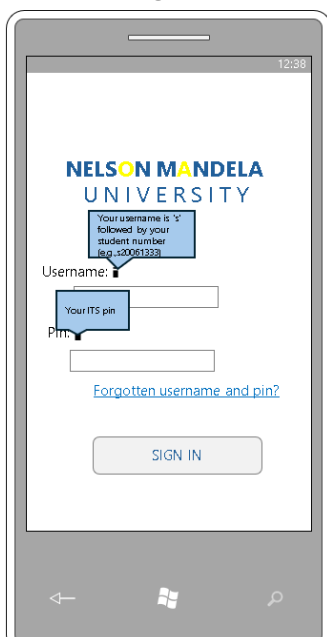
The University sends every student an email about the system with a link sending them to this welcome page.

Frame 1: Easy Login



The login is fast, simple and offers quick assistance to avoid errors with improved performance.

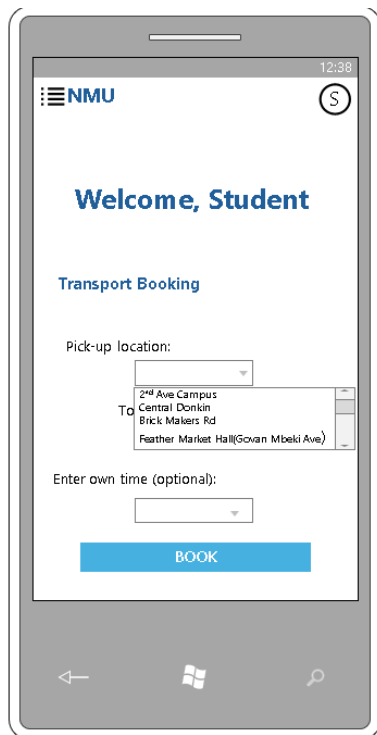
Frame 2: Login assistance



Continuing Frame 1 as Frame 2, the "I" offer's assistance when a student doesn't know which pin to key in or username. The system uses a Single sign in using University Credentials

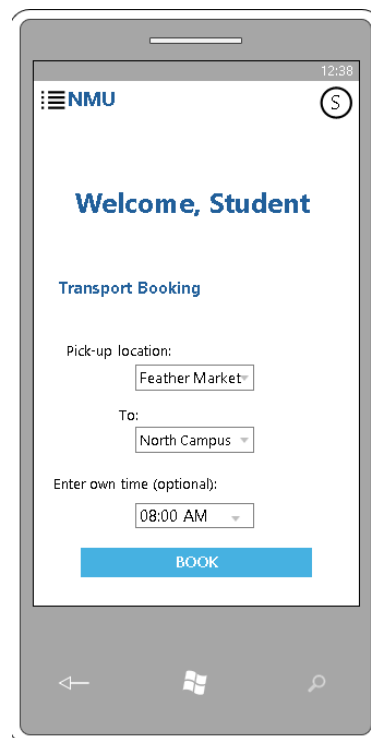


Frame 3: Booking Shuttle



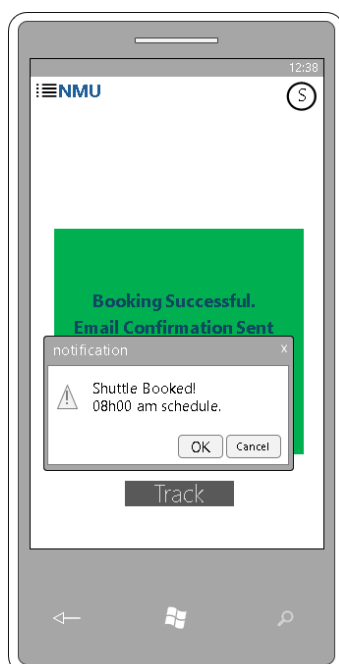
The layout is simple and minimalistic. The drop-down menu offers predefined locations for faster booking and accuracy

Frame 4



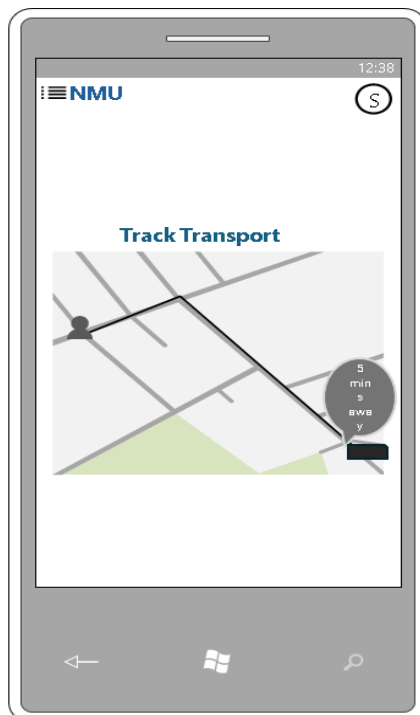
Usually there wouldn't be a need to select time since there's already a time schedule, but this option will allow flexibility and integrate class schedule with shuttle schedules while improving overall satisfaction. The book button confirms the booking of the shuttle.

Frame 5: Notifications



In frame 5, we see an immediate pop-up notification after a successful booking appear informing the student. In the background there's a message confirming that email has been sent. The track button below appears after a successful booking allowing the student to real-time tracking of the shuttle. Communication is important and also providing the options for the user to book efficiently.

## Frame 6: Real-time tracking



When the time for the shuttle approaches the student will be on the way to the shuttle stop. The system provides real time tracking of the system reducing uncertainty and wait times. A text message will be sent to notify the student of the approaching shuttle.

To conclude the improved interface of the system for university students offers a student friendly experience, improving on key points such as awareness of the system, shuttle availability struggles, and the booking process. Easy and simple booking process you can easily login, with predefined locations (pick-up and drop off) and the student can enter their own time. The system provides real-time notifications and tracking process reducing wait times, and it helps with integrating class schedule with shuttle times. The system aims to reduce frustrations related to arriving late at class, full shuttles and having to miss a shuttle because of early departures.

