**The National University of Lesotho**

**Department of Mathematics and Computer Science**

**Faculty of Science and technology**



**CS4431: Human-Computer Interaction**

**Task:** “Develop Point of Sales”

**Due:** “02 Sept 2025”

**Participants:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Student Number** | **Surname, initials** | **Major** |
| 1. | 202101687 | Tlelima, H.T | B. Sc. CS |
| 2. | 201902145 | Surname, R.N | B. Sc. CS |
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**Document formatting:**

Font size: 12 pts

Font type: Times New Roman

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Italic and underline: ‘to be applied sparingly to highlight important content.’

Line spacing: 1.5 pts

Paragraph spacing: before (0 pts) after (1.5 pts)

**1. Overview**

* **Project Name: Point of sale:**
* **Version: 1.0**
* **Date: 01 Sept 2025**
* **Prepared by: Tlelima Hlalele 202101687 and Nchochoba Repholositsoe 201902145**
* **Purpose of the website: Point of Sales**

**Target Audience: Cashiers, entrepreneurs**

**2. System Architecture:**

* **Technology Stack**

**1. Frontend: typescript, React.js, Node.js**

**2. Backend: Node.js**

**3. Database: Firebase**

**4. Firebase**

**5. Version control: Github**

**3. Requirements**

**3.1 Functional Requirements:**

1. **User registration & login**
2. **Content management**
3. **Payment integration**
4. **Search functionality**
5. **Reporting**

**3.2 Non Functional Requirements**

1. **Latency < 200 milliseconds**
2. **Security: Authentication**
3. **Firabase is scalable**
4. **Easy to use**

**4. Installation & Setup**

**4.1 Prerequisites**

* **Windows 10 or better**
* **You might need Node.js**

**4.2 Installation Steps**

* **Close resipotory from:** [**https://github.com/Repholositsoe/POS**](https://github.com/Repholositsoe/POS)
* **typescript, firebase**
* **Edit your enviromental variables and have this: C:\Users\Repholositsoe\AppData\Roaming\npm**
* **Setup firebase**
* **Start server**

**6. Database Design**

* **Price: float**
* **Quantity: Int**
* **Receipt: String**

**7. Features & Modules**

* **User Module: Registration, profile**
* **Admin Module: Dashboard, database**
* **Sales Module: Orders, invoices, payments**

**8. Testing**

* **Unit Tests**
* **Integration Tests**

**9. Maintenance**

* **Log monitoring**
* **Common Issues and fixes**

**10. User Guide**

* **User must create an account or continue with google/github**