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DEPARTMENT OF INFORMATION SYSTEM

GROUP B

BUSINESS ANALYSIS PROJECT 301B

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1.Introduction

Garment Division, a popular clothing store known for its stylish and affordable fashion, has long been committed to rewarding its loyal customers. The store currently offers a manual loyalty card system, where customers earn points with every purchase over a certain amount of time. However, while the program is appreciated by many, it comes with a significant drawback: if a customer loses their card, they also lose all accumulated points. To address this issue and enhance the shopping experience, the solution that is proposed is to introduce a new online customer points system. This digital solution will securely store all customer points, ensuring that points are never lost, even if the physical card is misplaced. With this upgrade, customers can easily track their points, redeem rewards, and enjoy a seamless, worry-free shopping experience at Garment Division.

2. REQUIREMENTS SPECIFICATION

STAKEHOLDER/USER REQUIREMENT

Customer

- SCR1-Customer must register with required information. Name, Surname, Cell phone number, Email(optional), ID number, Address, then create a password
- SCR2-Customer must be able to log in securely using email and password or social media credentials.
- SCR3-Customer must be able to update personal information
- SCR4Customer must be able to view history of earned and redeemed points
- SCR5-Customer must be able to check if they qualify for discount
- SCR6-Customer must be able to check discount balance
- SCR7-Customer must be able to track number of points
- SCR8- Customer must be able to logout from the system

Staff/customer representatives

- SR01- staff must be able to login on behalf of customer using customer login details
- SR02-Staff must be able to access customer data
- SR03-Staff must be able to update customer data
- SR04-Staff must be able to redeem points using cell phone/ID number

Manager

- SMR1-manager must be able to login to their account
- SMR2-manager must be able to track employee history
- SMR3-manager must be able to track customer points and redeemed history.
- SMR3-manager must be able to update customer information.

Administrator

- SA1-Admin must be able to register.
- SA2-Admin must be able to log in.
- SA3-Admin must be able to configure reward program.
- SA4-Admin must be able to manage customer account.
- SA5-Admin must be able to generate report.
- SA6-Admin must be able to view customer information.

2.2.1 BUSINESS REQUIREMENTS

| BUSINESS REQUIREMENT NUMBER | DESCRIPTION | STAKEHOLDER REQUIREMENT |
|-----------------------------|--|-------------------------|
| BRA1 | GD live to fulfil the commitment of selling high quality clothing at low prices by discount point earned | SCR5, SCR6, SA3 |
| BRA2 | GD objectives is to always retain their customer, for their different clothing needs through a loyalty program | SCR5, SCR1, SCR2 |
| BRA3 | GD aim to drive advocacy and referrals. Better customer insight through customer data and feedback. To improve product development and cost efficacies | SA11, SA10 |
| BRA4 | GD system will integrate with the stores POS system to track purchase and assign points | SA13, SA10 |
| BRA5 | GD system will send notification about promotions or offers that can earn extra point | SCR1 |

2.2 .2 CUSTOMER REQUIREMENTS

| REQUIREMENT NUMBER | REQUIREMENT SPECIFICATION |
|--------------------|---|
| CR01 | Customer must register with required information. Name, Surname, Cell phone number, Email(optional), ID number, Address, then create a password |
| CR02 | Customer must be able to log in securely using email and password or social media credentials. |
| CR03 | Customer must be able to update personal information |
| CR04 | Customer must be able to view history of earned and redeemed points |
| CR05 | Customer must be able to check if they qualify for discount |
| CR06 | Customer must be able to check discount balance |
| CR07 | Customer must be able to track number of points |

2.2.3 CUSTOMER REPRESENTATIVE REQUIREMENTS/STAFF

| REPRESENTATIVE NUMBER | REPRESENTATIVE SPECIFICATION |
|-----------------------|--|
| CRR01 | Staff must be able to login on behalf of customer using customer login details |
| CRRO2 | Staff must be able to access customer data |
| CRR03 | Staff must be able to update customer data |
| CRR04 | Staff must be able to redeem points using cell phone/ID number |

2.2.4 MANAGER REQUIREMENTS

| REPRESENTATIVE NUMBER | REQUIRMENTS SPECIFICATION |
|-----------------------|--|
| MR01 | as a manager I must be able to login in my account |
| MR02 | as manager I must be able to track employee history |
| MR03 | as a manager I must be able to track customer points redeemed history. |
| MR04 | as manager I must be able to update customer information. |

2.2.4 ADMINISTRATOR REQUIREMENTS

| REQUIREMENT NUMBER | REPESANTATIVE SPECIFICATION |
|--------------------|---|
| AR01 | Admin must be able to register. |
| AR02 | Admin must be able to log in. |
| AR03A | Admin must be able to manage customer account. |
| AR04 | Admin must be able to configure reward program. |
| AR05 | Admin must be able to generate report. |

| | |
|------|--|
| AR06 | Admin must be able to view customer information. |
|------|--|

2.3.1. FUNCTIONAL REQUIREMENTS

- FR1-User must be able to create and update their accounts.
- FR2-User must be able login once they have successfully created an account.
- FR3-Different end-user must be able to sign-in.
- FR4-System must automatically update earned points each time loyalty card is used.
- FR5-User must be able to see their current balance in rands.
- FR6-Website must be able to show current in-store sales.
- FR7-User should be able to track their purchase history.
- FR8-User must be able to track redeemed points.
- FR9-Customer must be able to use their points to get discount.
- FR10-Website must have helpdesk with working contact information.
- FR11-End-user must be able to give their feedback.
- FR12-Manager should be able to access user activity.
- FR13-All user information should be securely encrypted.
- FR14-System should be able to detect any illegal activities.

| FR NUMBER | FUNCTIONAL REQUIREMENT | DESCRIPTION | PRIORITY |
|-----------|------------------------|---|----------|
| FR01 | User registration | User must be able to create and update their accounts | high |
| FR02 | Login/Logout | User must be able login once they have successfully created an account | high |
| FR03 | Role management | Different end-user must be able to sign-in | high |
| FR04 | Point accumulation | System must automatically update earned points each time loyalty card is used | high |
| FR05 | Point display | User must be able to see their current balance in rands | high |
| FR06 | Sales listing | Website must be able to show current in-store sales | high |
| FR07 | Purchasing history | User should be able to track their purchase history | medium |
| FR08 | Redemption history | User must be able to track redeemed points | high |
| FR09 | Point at checkout | Customer must be able to use their points to get discount | high |
| FR10 | Help desk | Website must have helpdesk with working contact information | high |
| FR11 | Feedback submission | End-user must be able to give their feedback | high |
| FR13 | User insight | Manager should be able to access user activity | high |

| | | | |
|------|------------------|--|------|
| FR14 | Data encryption | All user information should be securely encrypted | high |
| FR15 | Fraud prevention | System should be able to detect any illegal activities | high |

2.3.2.NON-FUNCTIONAL REQUIREMENT

- NFR1-The system should have a quick response reaction time of 2 second.
- NFR2-The system should be able to handle online traffic.
- NFR3-The system should perform all expected requirement.
- NFR4-The system should be able protect customer sensitive information and have regular system checks.
- NFR5-The system should be easy and inviting to use navigate
- NFR6-The system should have an uptime of 99,99% ensuring accessibility most of the time.
- NFR7-The website should be deployable in different environment
- NFR8-The system should have module architecture to allow for easy updates.
- NFR9-User must be able to refer friends to a loyalty program website

| NRF NUMBER | NON-FUNCTIONAL REQUIREMENT | NFR DESCRIPTION | PRIORITY |
|------------|----------------------------|--|----------|
| NFR1 | Response time | The system should have a quick response reaction time of 2 second. | high |
| NFR2 | scalability | The system should be able to handle online traffic. | high |
| NFR3 | performance | The system should perform all expected requirement. | high |
| NFR4 | security | The system should be able protect customer sensitive information and have regular system checks. | high |

| | | | |
|------|------------------|---|--------|
| NFR5 | usability | The system should be easy and inviting to use navigate | high |
| NFR6 | reliability | The system should have an uptime of 99,99% ensuring accessibility most of the time. | high |
| NRF7 | portability | The website should be deployable in different environment | low |
| NRF8 | maintenance | The system should have module architecture to allow for easy updates. | medium |
| NRF9 | Referral program | User must be able to refer friends to a loyalty program website | high |

2.3.4. TRANSITIONAL REQUIREMENTS

- TR1-Transfer data from old system which is manual loyalty card to new system which is website ensuring all data is accurate.
- TR2-Training staff about the new system.
- TR3-The website should be integrated within other existing system.
- TR4-Covers all phases of the deployment.

TRANSITION REQUIREMENT PRIORITY

| TR NUMBER | TRANSITION REQUIREMENT | TR DESCRIPTION | PRIORITY |
|-----------|-------------------------|--|----------|
| TR1 | Data migration | Transfer data from old system which is manual loyalty card to new system which is website ensuring all data is accurate. | high |
| TR2 | Transition and training | Training staff about the new system. | high |
| TR3 | System integration | The website should be integrated within other existing system. | high |
| TR4 | Deployment and roll out | Covers all phases of the deployment. | medium |

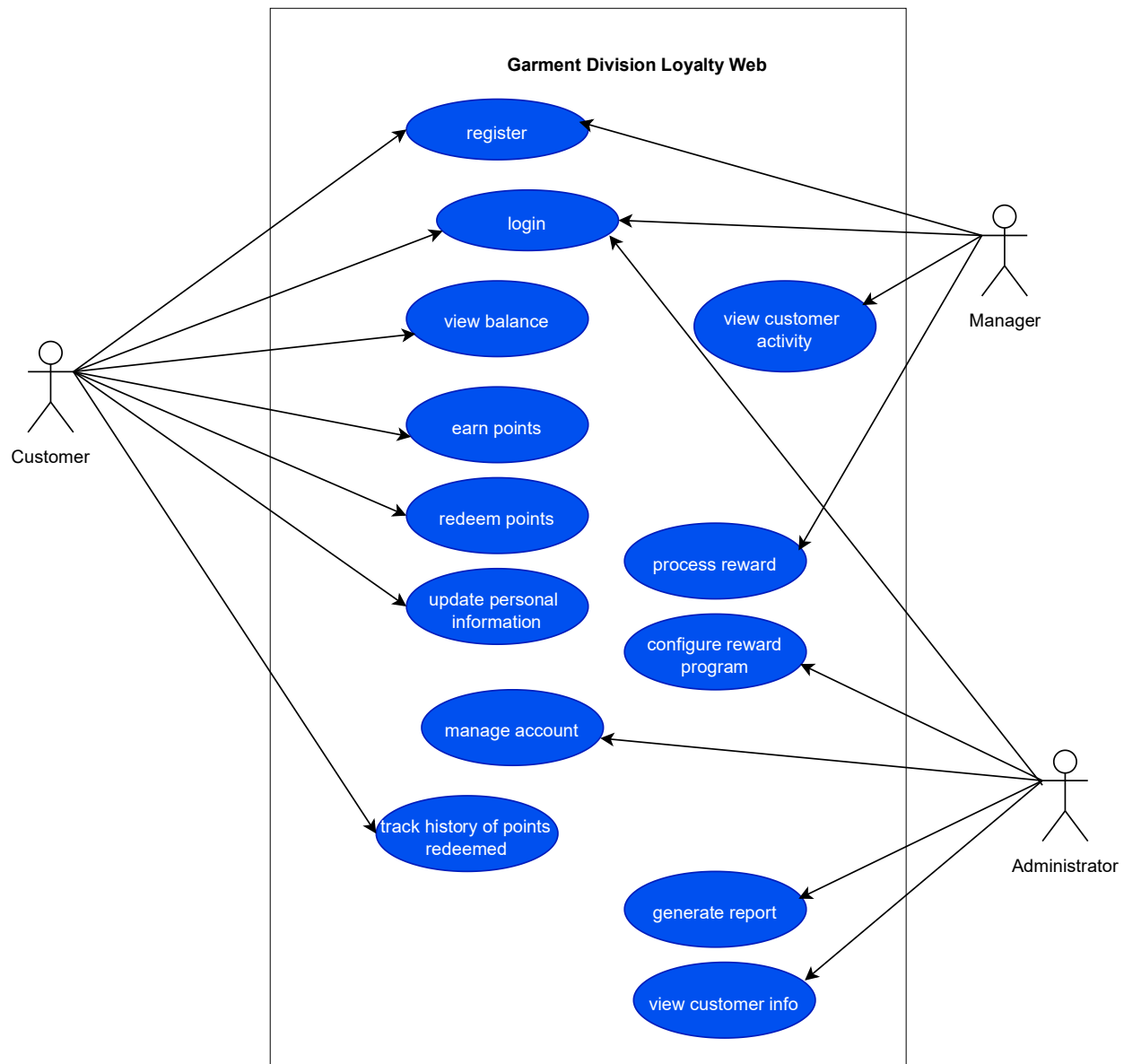
2.4. PRIOTIZING USER REQUIREMENT

| USER TYPE | HIGH PRIORITY | MEDIUM PRIORITY | LOW PRIORITY |
|-----------|--|--|-------------------------------------|
| CUSTOMER | <p>SCR1: Register using Name, ID number, Cell phone number</p> <p>SCR2: Login with password</p> <p>SCR3: Update personal information</p> <p>SCR5: Track number of points</p> <p>SCR8: Logout from system</p> | <p>SCR4: View history of points earned and redeemed</p> | <p>SCR6: Check discount balance</p> |
| STAFF | <p>SR01: log in on behalf of customer</p> <p>SR03: Update customer data/information</p> | <p>SR02: access customer data</p> <p>SR04: redeemed point for customer using ID number</p> | |
| MANAGER | <p>SMR1: Log in</p> <p>SMR4: Update customer information</p> | <p>SMR2: Track employee history</p> <p>SMR3: Track customer points redeemed</p> | |

| | | | |
|---------------|---|--|----------------------|
| ADMINISTRATOR | SA1: Register account SA2: Login SA4: Manage customer account | SA3: Configure reward program SA6: View customer information. | SA5: Generate report |
|---------------|---|--|----------------------|

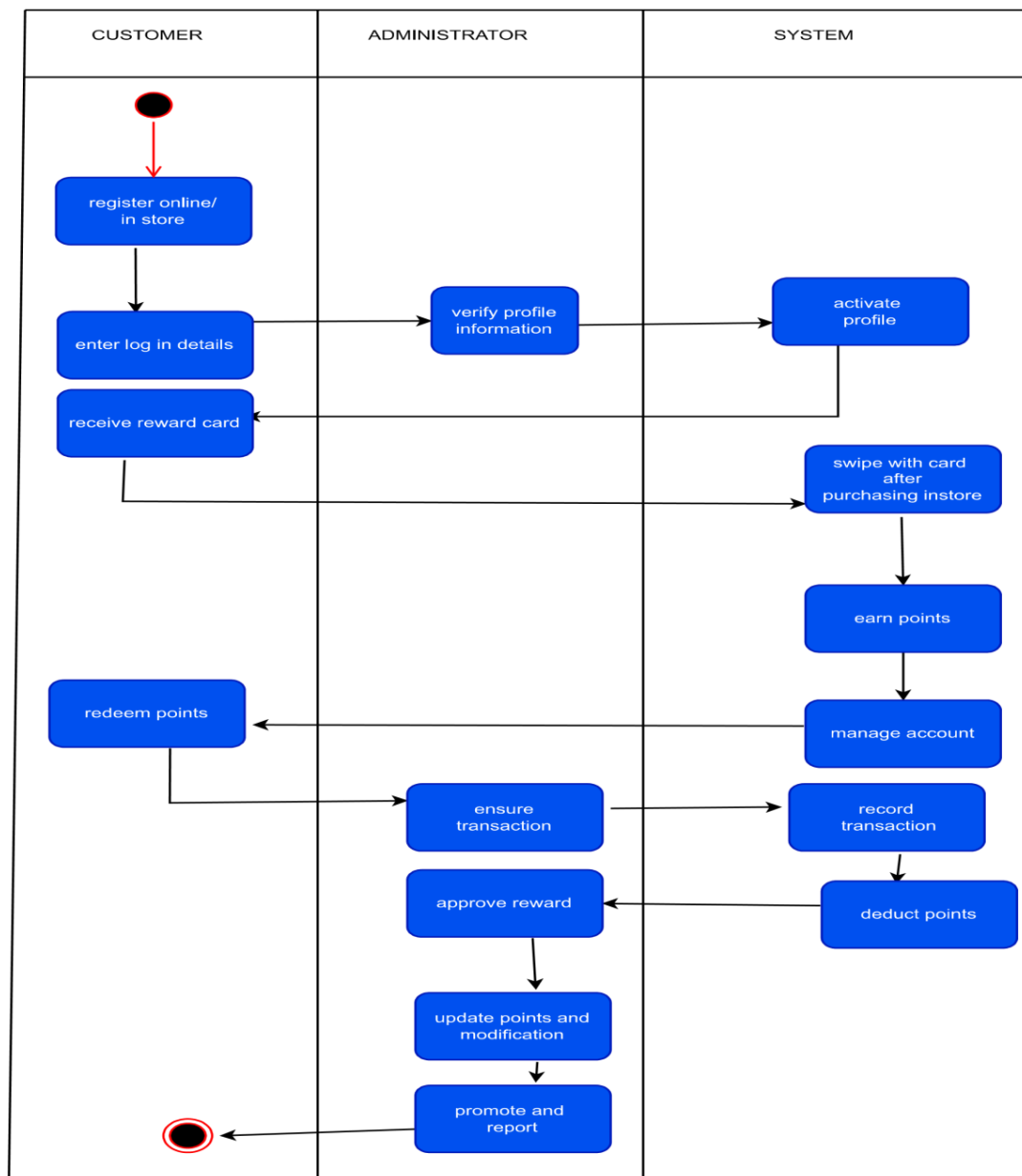
USECASE

The diagram below displays use case with three action representing stakeholders that demonstrate how they will be using recommended category that would be added on JADSOFT which is the current system for GD clothing. The use case represents relation of customer and the web giving the activities that will be present on the web for customers, manager activities as well as Administration.



ACTIVITY DIAGRAM

This activity diagram illustrates the interactions between customers and administrators within a garment division system. Customers register, log in, and manage their accounts, earning and redeeming points for purchases. The system facilitates these interactions, updating balances, reward statuses, and account information accordingly. Overall, the diagram showcases the seamless integration of customer and administrative tasks within the garment division system.



3.Requirement Verification

The Requirement Verification for a Point Card System is the process of ensuring that the requirements are Review which is about inspect requirement document and design specification, inspect which is about conduct walkthrough peer review, Test which is about perform unit testing and acceptance testing and Analysis which is about perform static and dynamic analysis of the system. This ensure that the service satisfy the user need.

| Business Requirement | Review | Inspect | Test | Analysis |
|----------------------|--------|---------|------|----------|
| BR1 | ✓ | ✓ | ✓ | ✓ |
| BR2 | ✓ | ✓ | ✓ | ✓ |
| BR3 | ✓ | ✓ | ✓ | ✓ |
| BR4 | ✓ | ✓ | ✓ | ✓ |
| BR5 | ✓ | ✓ | ✓ | ✓ |

| Stakeholder Requirement | Review | Inspect | Test | Analysis |
|-------------------------|--------|---------|------|----------|
| Customer | ✓ | ✓ | ✓ | ✓ |
| Customer Representative | ✓ | ✓ | ✓ | ✓ |
| Manager | ✓ | ✓ | ✓ | ✓ |
| Administrator | ✓ | ✓ | ✓ | ✓ |

| Functional Requirement | Review | Inspect | Test | Analysis |
|------------------------|--------|---------|------|----------|
| FR1 | ✓ | ✓ | ✓ | ✓ |
| FR2 | ✓ | ✓ | ✓ | ✓ |
| FR3 | ✓ | ✓ | ✓ | ✓ |
| FR4 | ✓ | ✓ | ✓ | ✓ |
| FR5 | ✓ | ✓ | ✓ | ✓ |
| FR6 | ✓ | ✓ | ✓ | ✓ |
| FR7 | ✓ | ✓ | ✓ | ✓ |
| FR8 | ✓ | ✓ | ✓ | ✓ |
| FR9 | ✓ | ✓ | ✓ | ✓ |
| FR10 | ✓ | ✓ | ✓ | ✓ |
| FR11 | ✓ | ✓ | ✓ | ✓ |
| FR12 | ✓ | ✓ | ✓ | ✓ |
| FR13 | ✓ | ✓ | ✓ | ✓ |
| FR14 | ✓ | ✓ | ✓ | ✓ |
| FR15 | ✓ | ✓ | ✓ | ✓ |

| Non-Functional Requirement | Review | Inspect | Test | Analysis |
|----------------------------|--------|---------|------|----------|
| NFR1 | ✓ | ✓ | ✓ | ✓ |
| NFR2 | ✓ | ✓ | ✓ | ✓ |
| NFR3 | ✓ | ✓ | ✓ | ✓ |
| NFR4 | ✓ | ✓ | ✓ | ✓ |
| NFR5 | ✓ | ✓ | ✓ | ✓ |
| NFR6 | ✓ | ✓ | ✓ | ✓ |
| NFR7 | ✓ | ✓ | ✓ | ✓ |
| NFR8 | ✓ | ✓ | ✓ | ✓ |

4. REQUIREMENT VALIDATION

4.1. Validation Process:

RVP1: A review of stakeholder requirements

RVP2: Walkthroughs and demonstrations with stakeholders

RVP3: Prototype testing with customers, staff, managers, and administrators

RVP4: Surveys and feedback forms

RVP5: Comparison to industry benchmarks and best practices Evaluation

Criteria:

4.2.1. Customer

RVC1: Ease of registration and login

RVC2: Accuracy in points tracking and redemption

RVC3: Usability of the interface

RVC4: Accessibility of account information

RVC5: Effectiveness of the notification system

4.2.2. Staff

RVS1: Efficient Customer Data Management

RVS2: Ease of point redemption process

RVS3: Accuracy of customer information updates

RVS4: Effectiveness of staff training

4.2.3. Manager

RVM1: Accuracy of employee history tracking

RVM2: Effectiveness of customer points tracking

RVM3: Timeliness of reports generation

RVM4: Easier to update customer information

4.2.4. Administrator

RVA1: Ease account administration

RVA2: Effectiveness of reward program configuration

RVA3: Focusses on accurate customer information RVA4: Timely report generation.

4.3. TRANSTION REQUIREMENT

TR1: Successful data migration from manual loyalty card system

TR2: Provides effective staff training

TR3: Integration seamlessly with existing systems

TR4: Ensures smooth deployment and rollout

TRANSTION REQUIREMENTS

| TR Number | Transition Requirements | TR Description | Priority |
|-----------|------------------------------|---|----------|
| TR1 | Data Migration | Successful data migration from manual loyalty card system | High |
| TR2 | Staff Training Effectiveness | Provides effective staff training | Medium |
| TR3 | System integration | Integration seamlessly with existing systems | High |
| TR4 | Deployment and Rollback | Ensures smooth deployment and rollout | High |

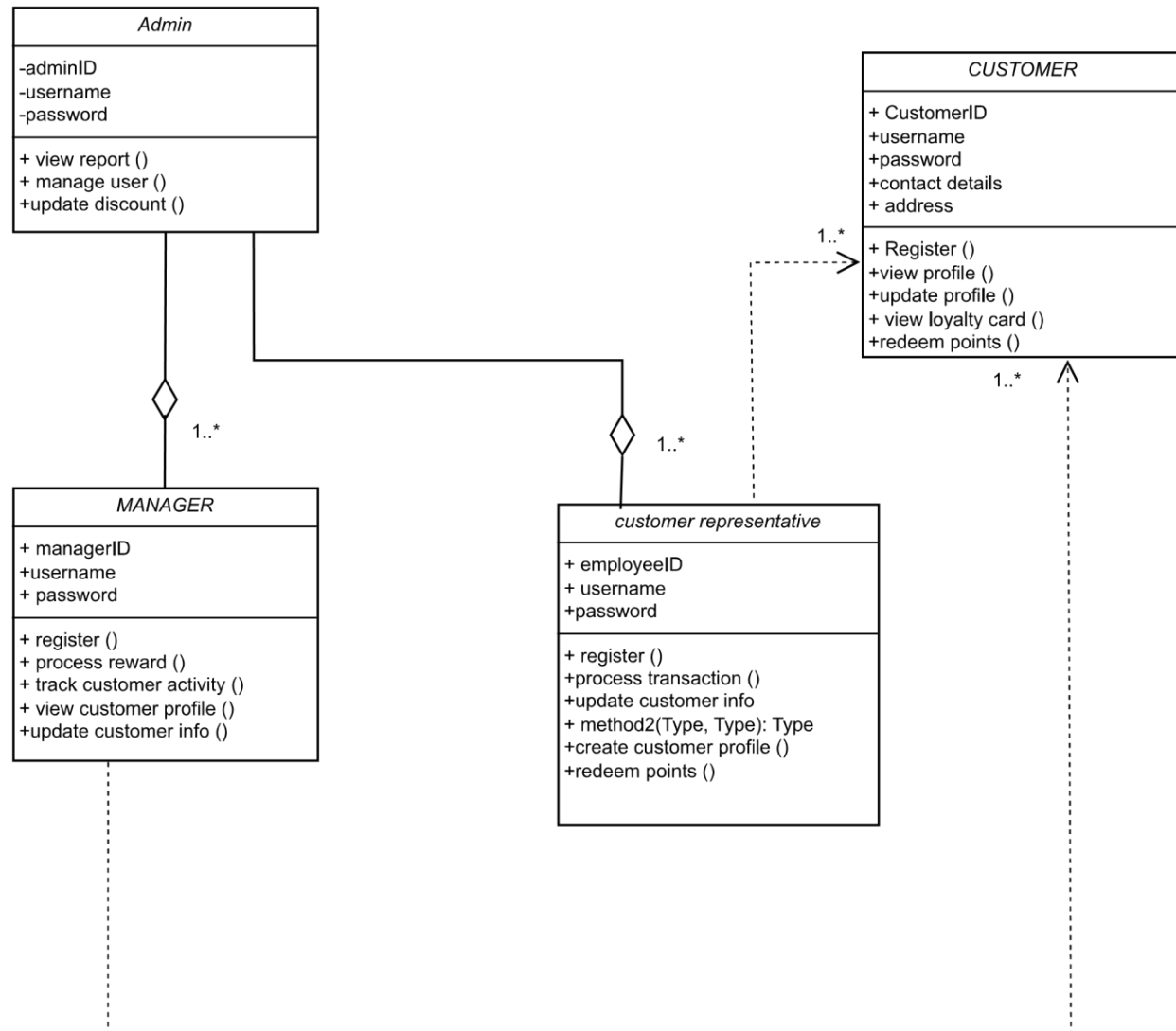
PRIOTIZING REQUIREMENTS VALIDATION

| USER | HIGH | MEDIUM | LOW |
|----------|---|---|-----|
| Customer | <p>RVC1: Ease of registration and login</p> <p>RVC2: Accuracy in points tracking and redemption</p> <p>RVC3: Accessibility of account information</p> <p>RVC4: Effectiveness of the notification system</p> | <p>RVC4: Account information accessibility (consumer convenience)</p> <p>Staff</p> <p>RVC5: Usability of the interface (important for user experience).</p> | |
| Staff | <p>RVS1: Efficient Customer Data Management</p> <p>RVS2: Ease of point redemption process</p> <p>RVS3: Accuracy of customer information updates</p> <p>RVS4: Effectiveness of staff training</p> | <p>RVS5: Training staffs</p> <p>RVS6: Spend more time on customer data management</p> | |
| Manager | <p>RVM1: Accuracy of employee history tracking</p> | <p>RVM5: Ease of updating customer</p> | |

| | | | |
|----------------|--|---------------------------------------|--|
| | RVM2: Effectiveness of customer points tracking RVM3: Timeliness of reports generation RVM4: Easier to update customer information | information (Support data maintaince) | |
| Administration | RVA1: Ease account administration RVA2: Effectiveness of reward program configuration RVA3: Focusses on accurate customer information RVA4: Timely report generation. | | |

5. REQUIREMENT ARCHITECTURE

The following structure represents a class diagram, showing the relationships between the classes. This diagram displays how the stakeholders relate with one another inside the Loyalty card web system.



6. DESIGN OPTIONS

Designs

The following designs present web examples that we have recommended for GD clothing store. Picture one displays the welcome screen which allows the user to login, Picture two displays the registration screen, Picture three displays the view for customer's account, picture four represent a web page for admin and lastly a web page for the manager. All these web pages are fully defined on the requirements.

Consideration

- **Customer data security:** ensure system complies with data protection regulations to safeguard customer information. Implement rebuts encryption and security protocols to protect sensitive data.
- **User friendly interface:** design a simple and intuitive interface for customers to easily track their points and redeem rewards. Consider mobile optimization accessibility.
- **Customer education:** develop clear communication strategies to educate customer about new system, including support channel
- **Migration of existing data:** plan for safe transfer points from the manual system to the new digital platform, ensuring that no customer loses their previously accumulated points
- **Incentives fir transaction:** consider offering limited time bonus or promotions to encourage customer to register for the new system and engage with it.

Benefit

- **Security and convenience:** customer longer have to worry about losing their loyalty card as their points will be stored online.
- **Easy tracking:** customer can effortlessly monitor their points balance and transaction history through a user-friendly interface.
- **Simplified redemption:** the system streamlines the process of redeeming reward, making it quicker and more efficient.
- **Enhance engagement:** with an online system, garment division can communicate promotions and personalized offers directly to consumers, fostering greater loyalty.
- **Data insight:** the store can analyze customer behavior and preferences, allowing for improved marketing strategies and tailored experiences.

| | |
|---|-------------------------|
| Stakeholder: customer | |
| requirements | System component |
| <ul style="list-style-type: none"> • Register for an account • Login • View balance • Earn points • Redeem points • Update personal information • Track history of redeemed points | system |


| | |
|--|-------------------------|
| Stakeholder: staff | |
| requirements | System component |
| <ul style="list-style-type: none"> • Login • Access customer data • Update customer data • Redeem points | system |

| | |
|--|-------------------------|
| Stakeholder: Administrator | |
| requirements | System component |
| <ul style="list-style-type: none"> • Login • Confirm reward program • Manage account • Generate report • View customer info | dashboard |

| | |
|-----------------------------|-------------------------|
| Stakeholder: manager | |
| requirements | System component |

| | |
|---|-----------|
| <ul style="list-style-type: none">• Register for an account• Login• View customer activity• Process reward | dashboard |
|---|-----------|

PICTURE 1



[About Us](#) [Contact Us](#) [Refund and Exchange Policy](#) [Loyalty Reward Program](#)

GARMENT DIVISION

New user register for account

Email

Password

Login

PICTURE 2

Welcome to registration page

Enter the following required information to create account

| | | |
|------------------|---|---|
| Email | <input type="text" value="m.malinga360@gmail.com"/> | * |
| Cell number +27 | <input type="text" value="064 778 9456"/> | * |
| Create user name | <input type="text" value="Mlondi"/> | * |
| Create password | <input type="password" value="*****"/> | * |
| Confirm password | <input type="password" value="*****"/> | * |

[Accept privacy policy](#) ✓

[Register Account](#) ➔



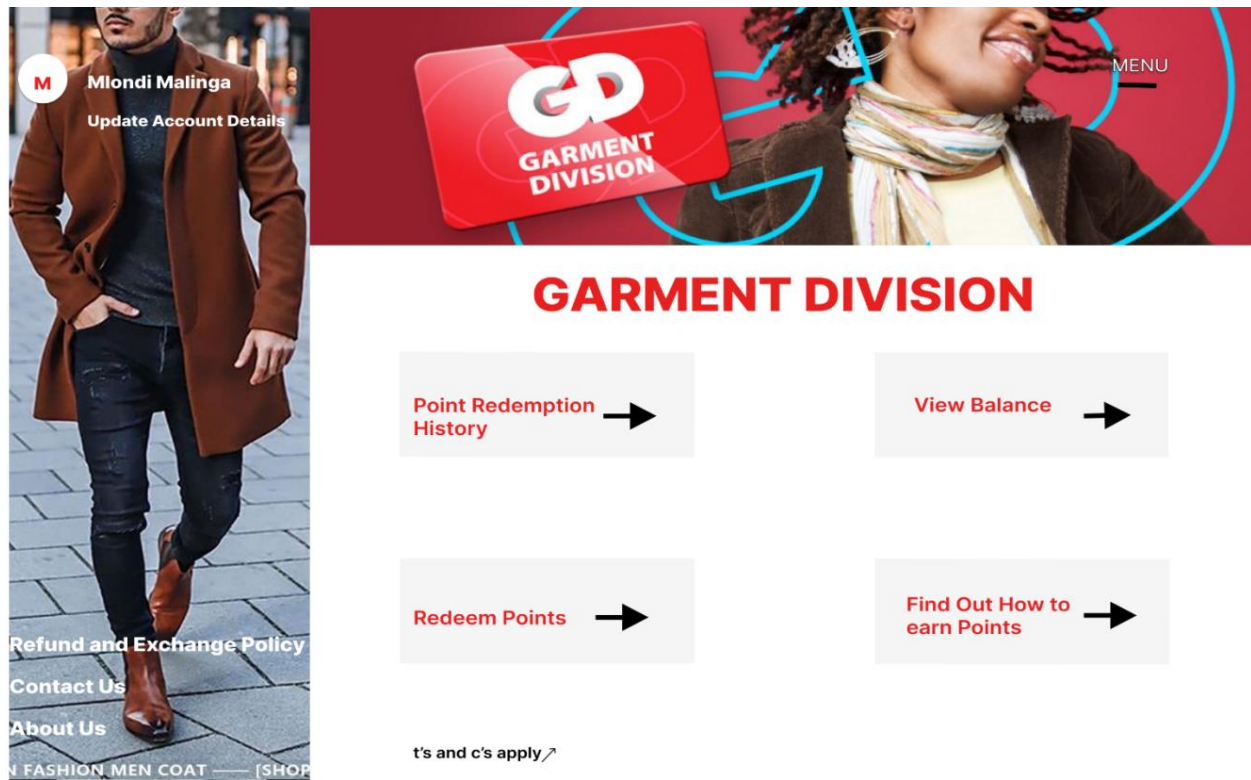
GD

At Garment Division, we live to fulfill our commitment to sell Unbeatable fashion at Unbeatable prices for the whole family, from infants to adults. Specializing in fashion and core clothing, shoes and accessories at discounted prices.

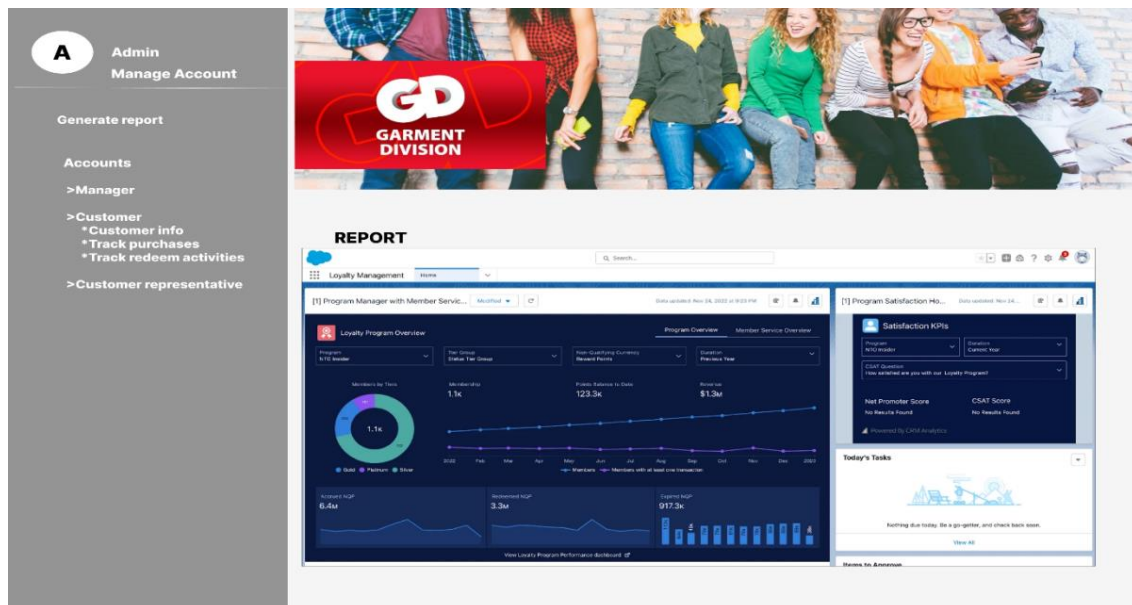
[Find out our terms and conditions for loyalty points](#) ↗

[Read our privacy policy](#) ➔

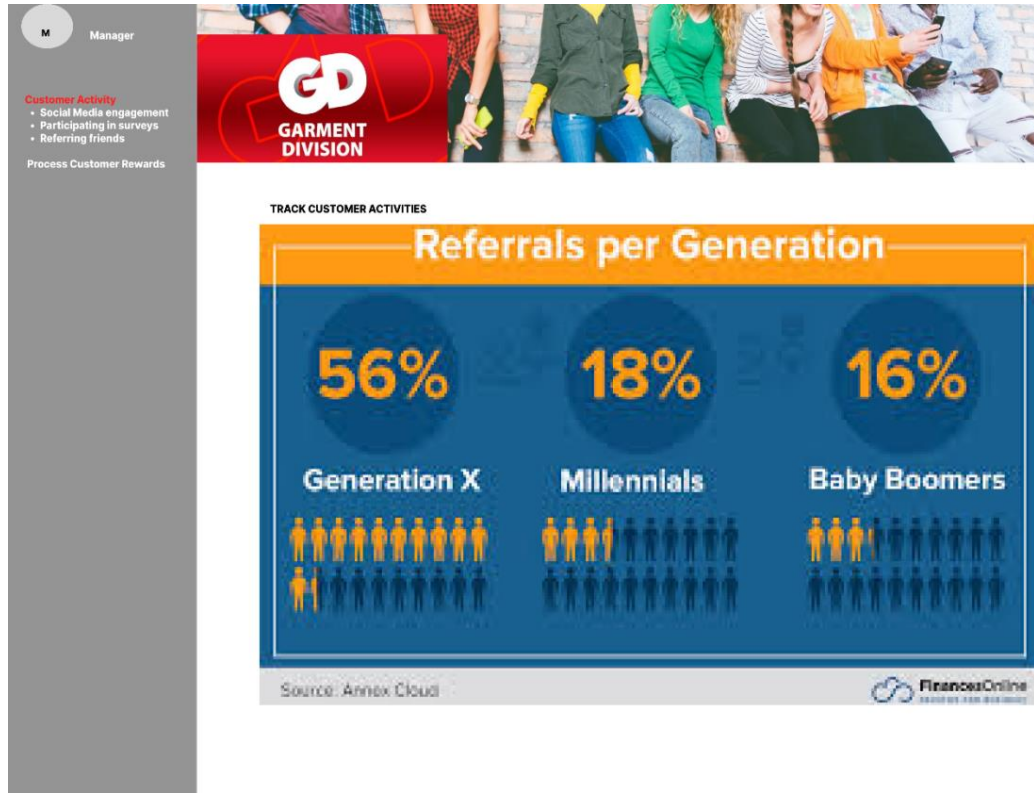
PICTURE 3



PICTURE 4



PICTURE 5



7. POTENTIAL VALUE

Solution One: Custom Rewards Online Points System

Benefits Description.

- **Customer Retention:** The company has about 1 000 members for the loyalty program of which 16% of them are partially actively using their rewards. This program will retain these customers. With an average revenue from loyalty program sales of R828 875, 00 from all royalty program customers. The company can expect an average customer retention of 14% out of 16% partially active customers of R828 875,00 for year one. This will increase to 16% in year two, the average benefit will increase with customer as years goes by.
- **Increased Sales:** The company can expect increased sale from year by 8% on year one, 14% on year two from an average of R1 200 000 then anticipated increase to R1 265 000 of total revenue year three sales will be up by 0,05% they will have increased by 20%.
- **Marketing Saving:** With an increasing number of customer retention, increasing sales and the loyal customers the marketing department can decrease marketing spending after year one of successfully implementing the system. From the total marketing spending they can minimize spending by 64% of R11 000 on year two and in year 3 a decrease of 63% of 8 000.
- **Company Value:** With outsourced development the company will be fully owning the system. This system will be categorized as an asset of value to the company this will increase the net worth/ value of the company by 5% over years.

| Benefits | Year One | Year Two | Year Three | Total Benefits |
|------------------------------|--------------------|--------------------|--------------------|-----------------------|
| Customer Retention | R116 042,50 | R132 620,00 | R165 600,00 | R 414 262,50 |
| Increased Sales | R 96 000,00 | R168 000,00 | R220 000,00 | R 330 000,00 |
| Customer Acquisition | R100 000,00 | R120 000,00 | R160 000,00 | R 380 000,00 |
| Customer Spending | R 50 000,00 | R 80 000,00 | R120 000,00 | R 250 000,00 |
| Cross Sales | R - | R 15 000,00 | R 25 000,00 | R 40 000,00 |
| Marketing Savings | R - | R 4 000,00 | R 3 000,00 | R 7 000,00 |
| Frequent Purchases | R 11 000,00 | R 25 000,00 | R 35 000,00 | R 71 000,00 |
| Company Value | R100 000,00 | R150 000,00 | R200 000,00 | R 450 000,00 |
| Total Yearly Benefits | R473 042,50 | R694 620,00 | R928 600,00 | R1 942 262,50 |

| Costs | Year One | Year Two | Year Three | Total Costs |
|---------------------------|---------------------|--------------------|--------------------|---------------------|
| Design & Development | R 200 000,00 | R - | R - | R 200 000,00 |
| Hosting | R 10 000,00 | R 10 000,00 | R 10 000,00 | R 30 000,00 |
| Security Features | R 8 500,00 | R 9 500,00 | R 9 500,00 | R 27 500,00 |
| Maintenance & Update | R 20 000,00 | R 20 000,00 | R 20 000,00 | R 60 000,00 |
| Marketing & Promotion | R 15 000,00 | R 11 000,00 | R 8 000,00 | R 34 000,00 |
| Reward Redemption | R 150 000,00 | R150 000,00 | R150 000,00 | R 450 000,00 |
| Total Yearly Costs | R 403 500,00 | R200 500,00 | R247 500,00 | R 801 500,00 |

Net Present Value= Present Value of Benefits – Present Value of Costs

NPV= 1 942 265, 50 - 801 500

NPV= 4 686 025,00

Return on Investment= Gain from Investment – Cost of Investment / Cost of Investment * 100%

ROI= 1 942 265,50 – 801 500 / 801 500 * 1

ROI= 1,42%

Solution Two: Third-Party Online Points System

| Costs | Year One | Year Two | Year Three | Total Costs |
|---------------------------|---------------------|---------------------|---------------------|-----------------------|
| Labour | R 700 000,00 | R 550 000,00 | R 550 000,00 | R 1 800 000,00 |
| Software Tools | R 10 000,00 | R 6 000,00 | R 6 000,00 | R 22 000,00 |
| Update & Maintenance | R - | R 3 000,00 | R 3 000,00 | R 6 000,00 |
| Miscellaneous | R 50 000,00 | R 5 000,00 | R 50 000,00 | R 105 000,00 |
| Hosting | R 10 000,00 | R 10 000,00 | R 10 000,00 | R 30 000,00 |
| Domain Registration | R 2 000,00 | R - | R - | R 2 000,00 |
| System Integrations | R 5 000,00 | R - | R - | R 5 000,00 |
| Security Features | R 8 000,00 | R 7 000,00 | R 6 000,00 | R 21 000,00 |
| Reward Redemptions | R 150 000,00 | R 150 000,00 | R 150 000,00 | R 450 000,00 |
| Promotion | R 15 000,00 | R 11 000,00 | R 8 000,00 | R 34 000,00 |
| Total Yearly Costs | R 950 000,00 | R 742 000,00 | R 783 000,00 | R 2 475 000,00 |

| Benefits | Year One | Year Two | Year Three | Total Benefits |
|------------------------------|---------------------|---------------------|---------------------|-----------------------|
| Customer Retention | R 116 042,50 | R 132 620,00 | R 165 600,00 | R 414 262,50 |
| Increased Sales | R - | R 90 000,00 | R 90 000,00 | R 180 000,00 |
| Customer Acquisition | R - | R 150 000,00 | R 185 000,00 | R 335 000,00 |
| Customer Spending | R 50 000,00 | R 75 000,00 | R 100 000,00 | R 225 000,00 |
| Marketing Savings | R - | R 8 000,00 | R 12 000,00 | R 20 000,00 |
| Company Value | R - | R 150 000,00 | R 200 000,00 | R 350 000,00 |
| Frequent Purchasing | R - | R 20 000,00 | R 40 000,00 | R 60 000,00 |
| Cross Selling | R - | R 25 000,00 | R 50 000,00 | R 75 000,00 |
| Total Yearly Benefits | R 166 042,50 | R 650 620,00 | R 842 600,00 | R 1 659 252,50 |

Net Present Value= Present Value of Benefits – Present Value of Costs

NPV= 1 659 252,5 – 2 475 000

NPV= -815 747,5

Return on Investment= Gain from Investment – Cost of Investment / Cost of Investment * 100%

ROI= 1 659 252,5 – 2 475 000 / 2 475 000 * 1

ROI= -0,33

Out of the two possible solution the most feasible solution is a loyalty program software which is available in a form of a web-app and mobile app. The benefits of this software outweigh the benefits of the CRM system also the costs are outweighed. Looking at the Return of Investment of solution one is positive this means that the investment will generate the profit and the ROI is higher for solution one this indicates that the investment is more profitable. The Net Present Value of

solution one is positive which means the project is expected to generate a return greater than the required rate of return and is therefore considered profitable.

8. CONCLUSION

In summary the aim of this document was to provide Garment Division with solutions on improving their business. Above we have shown how the proposed system will operate and how its stakeholders will interact with it. You can clearly see the cost and benefits that come with the proposed solutions that we have come up with. When looking at all the provided numbers and values one can clearly see that proceeding with Outsourcing will save the business money during the development of the entire project. We are certain that with this proposal we can help the business achieve its objectives and drive success

9. REFERENCES

chen, j., 2020. *wirefram based UI design search through image autoencoder..* s.l.:s.n.

MULVEY, P., 2013. *BUSINESS ANALYSIS FOR DUMMIES*. 3RD ed. CANADA: WILEY AND SONS, INCL.

NICHOLAS, J., 2013. *WHAT ARE THE UNDERLYING COMPENTENCIES OF BUSINESS ANALYST*. [Online]

Available at: <HTTPS://BUSINESSANALYSISMENTOR.COM/UNDERLYING-COMPARETEN> [Accessed 20 AUGUST 2022].

TORONTO, 2015. International institute of business analysis. In: *BABOK V3*. CANADA: s.n., p. 402.