Group 8 PT

[Email address]

Group members

1.Derrick Masiye M 221049487

2.Keanaan Claasen 220098174

3.Vista Weyulu 216005507

4.Auino Helena 217139086

group 8 assignment

2021 ICG

PART 1 (Pseudocode and Flowcharts)

# Objectives.

* Design an application that will allow Ayesha Beauty Creation to carry out their daily operations.
* The application should create value for the business n financial returns/service portfolio.
* The application should create efficiency in human resource function.
* The application should create customer relationship management database to serve as a sales tool.

Objective of anticipated application:

Collect data from different firm functions and store data in single central data repository. Help to resolve problems of fragmented data and enable coordination of daily activities to ensure efficient response to customers resulting in decision making by managers about daily operations and longer-term planning.

OR;

**Benefits of having an ERP in the core :**

1. ***Deep Market Focus:*** ERP helps the decision-makers by providing the key reports of high demand and least demand products along with the buying patterns of consumers so that the management can penetrate the market opportunities very easily.
2. ***Automation of the processes to move the business forward:*** The manual repetitive processes get eliminated from the end-to-end operation so that companies can utilize the saved resources for the growth of their business.
3. ***Real-time inventory & order management:*** Companies become potent enough to gets the insights of their current inventory and management of the orders using the right ERP platform.
4. ***Optimization of the unnecessary expenses:*** Since the entire business processes can be automated using ERP software, the loopholes related to the drainage of resource & time can be easily optimized leading to the saving of the valuable money.

<https://www.saturotech.com/erp-for-health-and-beauty-companies.php>

# **Modules**

The application is divided into the following sub-programs that will each help in serving the highlighted gaols.

# LogIn module

Module description;

-this module helps in ensuring that only authorised individuals get access to the resources. Users will be requested to input in their user credentials and only if the user credentials are correct will they be able to get access to the company’s resources.

Functions;

-user credentials validating

Start

Stop

credentialsValidator()

{

Prompt for password

Get password

Prompt for username

Get username

If (password==%password()) AND (username==%useername())then

Display “ welcome” + “username”

Else

Display “Incorect username or password”

Endif

}

Pseudocode for LogIn module

Start

Password,Username

Prompt for Username

Get username

Prompt for Password

Get Password

Read Username

Read Password

If( Username== %username()) AND (Password== %Password9())

Display “ welcome” + “username”

Else

Display “Incorect username or password”

Endif

Stop

Flowchart for LogIn module

Prompt for Usernrname

Get Username

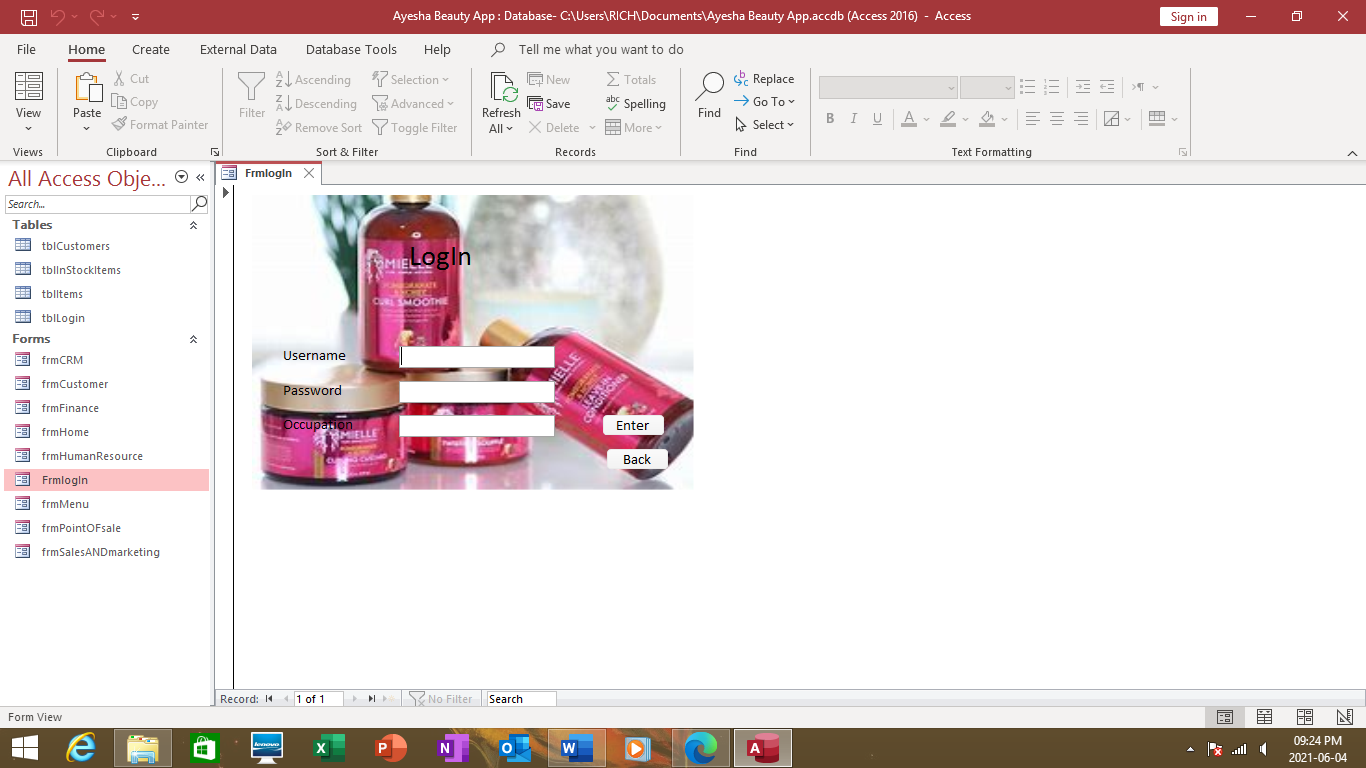
Display “Incorect username or password”

Display “ welcome” + “username”

( Username== %username()) AND (Password== %Password9())

Prompt for password

Get PAssword



## Finance (Financial return)

**Module description**:

Automating steps that were manual to perform and record daily routine transactions necessary to conduct business and further produces financial statements such as the General ledger, Balance sheet, Income & Expenditure, Cashflow, Bank Statements. This will result in increased efficiency of existing processes and improves decision making for ideal financial performance of Ayesha Beauty Creations. Essentially leading Ayesha Beauty Creation to objectively select resources, manage risks and maximise the returns on products and services rendered.

### Functions:

Generate invoices/receipts on products purchase entries; *{Receive sales order of product -item & quantity, Confirm inventory stock, Process sales order of product, Review correct item & quantity and Print invoice/receipt}.*

Start

Stop

invoices()

{ Change= 0,Total= 0 ,amountPayed= 0 ,itemCost= 0

Prompt for itemCode

Get itemCode

Promp for Quantity

Get Quantity

itemCost= (itemPrice\* Quantity)

Total = itemCost()

Change= (amountPayed-Total)

Print”itemCost”

Print “amountPayed”

Print”Total”

Print”Change”

}

CARD Payment option;

*{Enter completed Sales order of product received from client, Card payment verification by network, Card validation by Bank, Funds availability check, Complete Transaction, Card holder receives text/sms notification of debited amount and Send to Customer database.}*

Start

Stop

cardPayement()

{

customerFile,

Prompt for Payment\_Method

Get Payment\_Method

Prompt for cardNumber

Get cardNumber

If ( Payment\_Method == “Card”)then

Prompt customer for pin

Get pin

If (pin== %()then

customerFile= customerFile + customer

}

or CASH Payment option;

*{Enter completed Sales order of product received from client, Input cash payment- totalNotes, Calculate change, Complete Transaction, Print receipt and Give customer change.}*

Start

Stop

cashPayement()

{

customerFile,

Prompt for Payment\_Method

Get Payment\_Method

Prompt for cash

Get cash

If ( Payment\_Method == “Cash”)then

Prompt customer for pin

Get pin

If (pin== %()then

customerFile= customerFile + customer

Creation of Reports on financial performance and position;

{*Determine type of statement, Initiate request for financial statement, Accept request for financial statement type and Display report on financial statement}*

Start

Stop

reportGenarator()

{

Prompt for statementType

Get statementType

Search in database

Display “statementType()”

}

Accounts Receivable/Debtor;

*{Deliver products as per Sales order, Produce sales invoice, Issue credit note and Display debtor balance.}*

Start

Stop

accountDebtor()

{

debtorBalance= 0

prompt Total\_Cost

Get Total\_Cost

debtorBalance= Total\_Cost

Print “ You outstanding debt is” +”Total\_Cost ”

### PSEUDOCODE for sells entry

**START**

Prompt for *itemCode*, *quantity of items* and *totalNotes/Card*

Get for *itemCode*, *quantity of items*

Search for itemName and price

Calculate totalCost = (itemName and price) \*quantity

Get totalNotes *(cash)*

Else get Swipe debit/creditCard*(swiping)*

Calculate change = totalNotes – totalCost

Display change

Give change from totalNotes

Print receipt

**STOP**

### PSEUDOCODE for financial statements

**START**

Prompt for type of financial statement/Document

(*General ledger, Balance sheet, Income & Expenditure, Cashflow, Bank Statements etc.*)

Get type of financial statement/Document

Generate report on type of financial statement/Document

Display Result/Print report

**STOP**

### Flowchart for Finance module

FLOWCHART (Product Sales Details)

Prompt for itemCode, quantity of items and totalNotes/Card

Get for itemCode, quantity of items

Search for itemName and price

Calculate totalCost = (itemName and price) \*quantity

Payment Method

Card

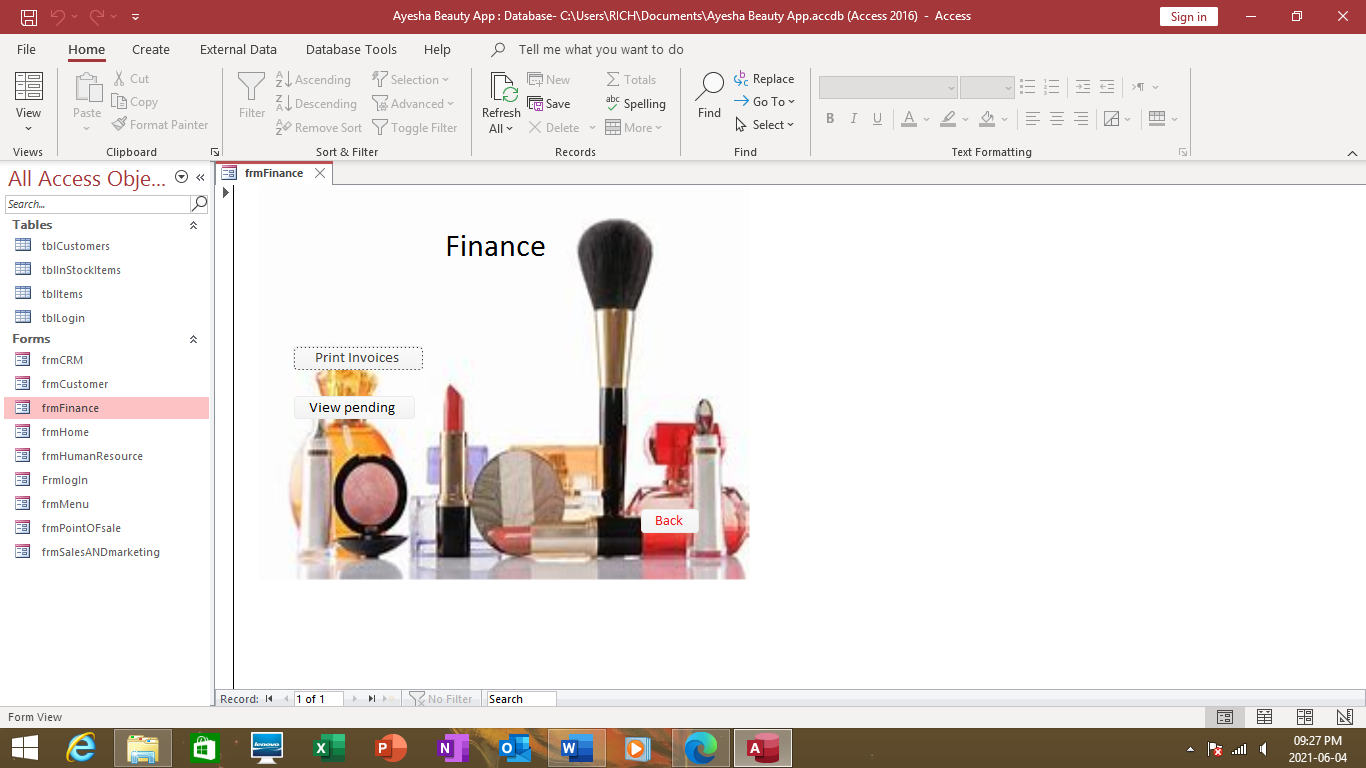
Cash

Calculate change = totalNotes – totalCost

Else get Swipe debit/creditCard*(swiping)*

Display change/Print receipt

Give change from totalNotes



## Sales and Marketing (SM module)

Module description

This automates the functions of the marketing Departments in marketing the products and services, it ensures that services are correctly availed to the customers, customers receive quality products from the money that they spent. It also automates the storing information such as purchased items, item prizes etc.

### Functions;

* Store information such as purchased items, in-stock items, item prices etc.
* Suggest modes of marketing products.
* Profit maximization
* Monitoring the product development process.

### **Pseudocode for setting/storing item prices**

Start

Numeric productionCost

prompt for username,userPassword,itemCode

Get username,userPassword,itemCode

IF (username==”Manager”) AND (userPassword==”####”

Display “Please enter the price of item”

Get itemPrice

IF(itemPrice>productionCost)

Display ”Good decision,the entered price allows for profit maximization”

IF(itemPrice<productionCost)

Display “Bad decision,the entered price does not allow for profit maximisation ”

End(IF)

Else

Display “ You are not authorised to set item prizes, Please try again later”

End

Stop

### Pseudocode for determining marketing strategy.

Start

strategyNum1=0,strategyNum2=0,strategyNum3=0

Display “Please provide the item’s code to determine which strategy sales the most ”

prompt for itemCode

accept itemCode

IF (strategyNum1>strategyNum2) AND (strategyNum>strategyNum3)

Display “The best strategy to market this item is through + ”strategyNum1”+ because it has more sales”

IF (strategyNum2>strategyNum1) AND (strategyNum2>strategyNum3)

Display “The best strategy to market this item is through + “strategyNum2” + because it has more sales ”

Else

Display “The best strategy to market this item is through + “strategyNum3” + because it has more sales ”

End

End

End

Stop

Flowchart

**Flowchart for setting up item price**

prompt for username,userPassword,itemCode

Get username, userPassword, itemCode

If username==”manager” AND userPassword==”####”

NO

Display”You are not authorised to set item prices,Please try again”

Display”Bad decision,the entered price does not allow for profit maximization”

YES

Display “Please enter the item price”

NO

If itemPrice>productionCost

Get itemPrice

YES

Display”Good decision,the entered price allows for profit maximization”

**Flowchart for determining marketing strategy.**

Display “Please provide the item’s code to determine which strategy sales the most ”

prompt for itemCode

Get itemCode

IF (strategyNum1>strategyNum2) AND (strategyNum>strategyNum3)

Display “The best strategy to market this item is through + ”strategyNum1”+ because it has more sales”

YES

YES

NO

IF (strategyNum2>strategyNum1) AND (strategyNum2>strategyNum3)

YES

Display “The best strategy to market this item is through + “strategyNum2” + because it has more sales ”

NO

Display “The best strategy to market this item is through + “strategyNum3” + because it has more sales ”

## Human Resources (HR) Module

What is Human Resources (HR)?

* The HR is the department is responsible to deal with the hiring(recruitment), admin and training of the staff in an organization.

### functions

Human Resources has 6 main functions these being:

Recruitment

* The HR is responsible for advertising job postings then source suitable candidates for the Job posted.

Workplace safety

* HR should make sure that there are Health regulations in place to offer a clean and safe environment.

Employee relations

* The employee and labour relations functions of HR may be combined and handled by one specialist or be entirely separate functions managed by two HR specialists with specific expertise in each area.

Compensation Planning

* HR functions include setting compensation structures and evaluating competitive pay practices.

Labor Law Compliance

* HR staff must be aware of federal and state employment laws such as Title VII of the Civil Rights Act, the Fair Labor Standards Act, the National Labor Relations Act and many other rules and regulations.

Training

* Leadership training may be required of newly hired and promoted supervisors and managers on topics such as performance management and how to handle employee relations matters at the department level.

### Pseudo Code for Recruitment

Start

Identify hiring

Create job description

Post job description to company website

Collect info from applicants

Review applications

If applicant meets requirements

Then Send email for interview

ElseIf requirements not met

Then send rejection email

Arrange interview with HR

Review top candidates

If the right fit

Send email with offer

If candidate accepts

Add employee

Send thank you email

Stop

### Flowchart

Send rejection email

Is candidate the right fit?

Review top candidates

Are requirements met?

Arrange interview with HR

Send rejection email

Send email for interview

Review applications

Post Job description to company website

Collect information from applicants

Identify hiring

Create Job Description

Yes no

No

Send email with offer

Yes

Does candidate accept?

YES NO

Add employee

Select top second best candidate

Send Thank you email

## Customer Relationship Management -CRM

**Module description**:

Obtain relevant reliable details about customers with their consent to develop strong ties and loyalty to help make informed decisions to aid in customer intimacy to ensure operational excellence by providing exceptional customer service hence maintaining a competitive advantage.

**Benefits**:

Retaining existing/old customers, managing new customers by offering best user experience.

Supports in aiding Sales function as well.

### Functions:

Biography information –

Title {Dr/Mr/Mrs/Ms}

Age {Current\_year – birth\_year}

Gender {Female or Male}

Name & surname {Given first\_name and last\_name}

Contact details {Telephone, mobile & email}

Employment {Place of work & designation}

Address {Residential, Work or Postal}

PSEUDOCODE (Customer Relationship Management **- CRM)**

**START**

Customer record creation (Is Customer new Yes or No?)

Prompt for Title, Age, Gender, Name & surname, Contact details, Employment, Address

Get Title, Age, Gender, Name & surname, Contact details, Employment, Address from Customer

Elseif existing/old Customer update Title, Age, Gender, Name & surname, Contact details, Employment, Address from Customer

Request for customer feedback on product bought/ service provide, if satisfactory proceed

Else if not satisfactory prompt for further details

Transfer captured/updated customer details/information to Customer Management Database

Perform data analysis and Make decision on how to improve on product quality and customer service.

**STOP**

### FLOWCHART (Customer Relationship Management - **CRM**)

Customer \_record\_creation = = “New”

YES

NO

Existing/old Customer update Title, Age, Gender, Name & surname, Contact details, Employment, Address from Customer

Prompt for Title, Age, Gender, Name, surname, Contact details, Employment, Address

Get Title, Age, Gender, Name & surname, Contact details, Employment, Address

Customer­\_Feedack== "satisfied“

NO

YES

Prompt for furtherDetails

Perform data analysis and Make decision on how to improve on product quality and customer service.

Links

Github: [DerrickMubiana2021/ICG-Group-8-PT-Assignment: This is a Group project that was designed and made by group 8 members to solve the stated problem (github.com)](https://github.com/DerrickMubiana2021/ICG-Group-8-PT-Assignment)

Trello : [solutions | Trello](https://trello.com/b/24rSBi2U/solutions)

Application solution: MS Access application solution available on Github

[DerrickMubiana2021/ICG-Group-8-PT-Assignment: This is a Group project that was designed and made by group 8 members to solve the stated problem (github.com)](https://github.com/DerrickMubiana2021/ICG-Group-8-PT-Assignment)