

GOTHAM BANK: HR INFORMATION SYSTEM

PROJECT REPORT

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❖ **Business Description:**

Gotham bank's head of HR, James Gordon, is seeing their competitors HR information systems perform drastically more efficiently. The bank only has branches inside the city of Gotham and has 1,500 employees. The new HR system should include a system to perform tasks in: payroll, benefits, recruitment, training, termination and transitions, and manager to employee and employee to employee evaluation. The current system lacks automation, creating inefficiencies in the processes to perform the above tasks.

❖ **Business Need:**

Jim Gordan, wants to develop a system which keeps track of the HR information system that will provide room to sustain growth. Currently, the model has a disparate HR information system. Employees and HR Division staff have to login to multiple systems to record and access the information. This results in dual manual data entry, low data quality and inefficient operations. Thus, building a new automated system will allow HR activities and processes to occur electronically. Also, it would help in increasing the productivity and efficiency of both the manager and the employees of the organization.

❖ **Business Requirements:**

Automated system and improved design will create a single, robust enterprise. The most specific area of HR information system which improves would be the flexible design that will feature databases that are integrated with a wide range of features. The capability of the system provides the ability to create reports and analyze information quickly and accurately, in order to make the workforce easy to manage. Creating a central hub for employees to access evaluations, pay stubs and benefit options and provide management access to new hire packets and termination papers without needing personnel from HR to assist.

1. The system will allow for evaluations to be taken and stored for easy access throughout the year.
2. An employee hub will give access to time cards, past evaluations, and benefits package information.
3. Payroll will automatically calculate and take out taxes and benefits from the weekly checks.
4. To achieve the organization's goals and maintain the standards, employees will be given training regarding the banking information system.
5. The System will allow employees to manage their own benefits, such as requesting information and initiating actions, with minimum exchange of forms and other paper documents.

❖ **Business Value:**

The system will give value to the management and employees of Gotham Bank by ensuring ease of access, secure processing of confidential information, and a simple UI interface to allow for transition from the old processes. Creating a single hub that employees can access will create a robust enterprise program that ensures accuracy and security for employees. By creating a robust enterprise system, expanding the branches of Gotham Bank is much simpler from an HR perspective.

❖ **Special Issues and Constraints:**

Issues that are relevant to the implementation of the system that need to be known by the approval committee are as mentioned below:

1. The old system and new system are drastically different. A training session and time to implement is required.
2. The system should have a dedicated manager to take care of the system and ensure its smooth running.

❖ **System Description:**

1. Evaluating Peers: Reviews are very important for any business. In this use case, peers would rate other employees and vice versa on the grounds of their behavior, attitude, skills etc. These reviews help in better interaction with the people and assigning further jobs. The main actor of this use case is employees.
2. Manager's Appraisal: Appraisals forms the basis of the organization. This use describes the process of manager providing feedback and giving appraisal to his employees. He would read peer reviews, have his opinion of the employee and then give appraisals on the basis of work done by the employee. The actor of this use case is the Bank Manager.
3. Start of employment: This use case is for new hired employees. It shows the process of creating his user profile on the website and providing the employee with his access card and other details. This would be an important use case as the information entered here would be carried forward everywhere. The actor for this use case is the HR employee who would register the new employee in the system.
4. Payment to Employee: Every employee is paid salary. The system would help determine each month's salary paid to the employee after making deductions for benefits/ taxes/ etc. The system is very useful as it would make it easy to compute the salary and store them for future references.
5. Leave Processing: The leave processing functionalities provides the employees to view leave balances and apply for leave. The bank manager would process the request made by employee and provide his decision of approval or rejection.

6. Employee Leaving the Company: This use case is regarding the termination of employment. Once the employee resigns from his workplace, the formalities to be completed is done by this use case. It helps in determining the final pay check, cancellation of other benefits etc. The HR employee is the main actor for the use case, along with the resigning employee.
7. Employee benefits: This use case helps employees to avail the benefits provided by the company. He would be required to submit supporting documents which needs to be validated by the bank manager and the request needs to be approved by him. The main actor for this use case is the employee and the manager.
8. Training: The training functionality of the system allows the employee to gain practical knowledge and expertise by attending various training sessions. The company from time to time keeps conducting trainings for employees, which they can register for. The employee makes the most interaction for this in the system.

❖ **Business Requirements:**

Functional Requirements

Process Oriented

1 Evaluation:

- 1.1 - The system would require employees to provide feedback of other employees are rate their behavior, i.e. Peer evaluation.
- 1.2 - Managers would provide yearly reviews to employees on the system.
- 1.3 - Employees would give their reviews on the company's existing policies and changes they would like to have on the system.
- 1.4 - The system would categorize employees for appraisal based on their joining date and joining position.

2 Payroll:

- 2.1 - The system will allow managers to sign off on clock in and out times weekly
- 2.2 - The system will record addition of new hires and information of all the employee's financial records with the company.
- 2.3 - The system will process a paycheck to the employee weekly.
- 2.4 - The system will allow all the employees to update clock in times and update personal information through employee hub.

3 Benefits:

- 3.1 - The System will provide basic information to the employee regarding the requirements, benefits and procedures related to employee benefits.
- 3.2 - The System will determine employee eligibility for entitlements and coverage of benefits.
- 3.3 - The System will enable employees to get monthly notifications through text/email for constant monitoring.
- 3.4 - The System will allow employees to manage their own benefits, such as requesting information and initiating actions, with minimum documentations.

4 Training:

- 4.1 - Allow for access to training through the hub.
- 4.2 - The System provides updates on training sessions organized by the company.

Information Oriented

1 Evaluation:

- 1.1 - The system should be able to track the peer review for all employees that are received or not.
- 1.2 - System should alert when the employee has not made his review.
- 1.3 - System should inform every employee of their performances and milestones achieved every quarter

2 Payroll:

- 2.1 - The system should alert the employee that they have not clocked in at the scheduled time.
- 2.2 - The system will automatically take into account meal and break time requirements.
- 2.3 - The system notifies management when the appropriate time to sign off time cards is.

3 Benefits:

- 3.1 - The system must retain employee's record history for seven years.
- 3.2 - The system will include the new benefits introduced for the employees.
- 3.3 - The system must include the updated record for all the approved transactions and other benefits availed by the employees for the entire service period.

4 Training:

- 4.1 - The system should give access to employees to view the training sessions available, one month in advance.
- 4.2 - The system should also show the names of employees who have registered for the training to all employees

Non-Functional Requirements

1 Operational

- 1.1 - The system should be compatible with all web browsers
- 1.2 - Interface of new system should be user friendly
- 1.3 - The system requires ample excess storage space for archived time cards and storage of digital documentation.
- 1.4 - New automated system should be printer-friendly in order to print data in tabular format and reports such as 'pie charts'.

2 Performance

- 2.1 - The system should be available 24 hours a day
- 2.2 - Records should be updated at a time lapse of 30 seconds
- 2.3 - The system can process multiple users in the hub at once.
- 2.4 - Company can hire third party experts or technical helpline for sudden system failures.
- 2.5 - The outages and scheduled maintenance should get completed in evening hours to allow uninterrupted work in day time.

3 Security

- 3.1 - The system should run only on company devices, ensuring security and confidentiality of data
- 3.2 - The system should be protected from the latest virus and malwares.
- 3.3 - The system approved transactions must be accurately affected and documented, and confirmed in a timely manner to the employee.
- 3.4 - The Employees personal information regarding salary and reviews is to remain confidential

4 Cultural and Political

- 4.1 - Every employee must sign a Non-Disclosure Agreement.
- 4.2 - Client information should be protected under CDP (Client Data Protection) Policy.
- 4.3 - The payroll and benefits given to employees should be fair and ethical
- 4.4 - The system should be able to distinguish between US currency and currency from other nations.

USE CASE -1			
Use Case Name: Evaluating Peers		ID: UC – 1	Priority: High
Brief Description: This Use Case describes the process of evaluating the peers in the system			
Actor: Bank employees			
Trigger: Peer Evaluation helps in having a healthy environment at workplace			
Type <input checked="" type="checkbox"/> External <input type="checkbox"/> Temporal			
Preconditions: <ol style="list-style-type: none"> 1. The employees should be authenticated to use the evaluation system 2. The employee should have been with the company for at least 6 months 3. The employee should be a full-time employee to evaluate other employees 			
Normal Course 1.0 Evaluate the peers <ol style="list-style-type: none"> 1. The employee selects the employee he wants to give a review. —————→ 2. System also provides a questionnaire to be answered in points system ←———— 3. System asks the evaluating employee, whether they want to disclose their identity or not ←———— 4. The system displays the evaluation form for review and submission —————→ 5. System asks if the employee wants to make another review (Alternate course 1.1). ←———— 6. Review datastore is updated. —————→ 			Information for Steps Employee details Survey Questionnaire Identity disclosure Review and Submit Another Review Review details updated
Alternative Course(s): 1.1 System asks if the employee wants to make another review (occurs at step 5) <ol style="list-style-type: none"> 1. If the employee wants to make another review, the system asks, if it is from the same department or another department. —————→ 2. As per employee’s response, the system allows to enter details of the next employee and Normal course 1 is followed. —————→ 			Review Employee details
Post conditions: <ol style="list-style-type: none"> 1. System should highlight the name of employees left to be given evaluation 2. Once evaluation is submitted, it cannot be altered. 			
Exceptions: E1: Employee with less than 6-month tenure in the company can evaluate employees, if the management asks so			
Summary:			
Inputs	Source	Outputs	Destination
Survey Questionnaire	Review Datastore	Employee details	Employee Info Datastore
Identity disclosure	HR System	Review and submit	HR System
Another Review	Review Datastore		
Review	Review Datastore		

USE CASE -2			
Use Case Name: Manager’s Appraisal		ID: UC - 2	Priority: Med
Brief Description: This Use Case describes the process of manager’s review of employees and performance appraisal via the system			
Actor: Bank Manager			
Trigger: Appraisals form an important part of the organization Type <input checked="" type="checkbox"/> External <input type="checkbox"/> Temporal			
Preconditions: 1. Manager should have the valid authorization write appraisals 2. Manager should not be bias to any employee			
Normal Course 1.0 Performance appraisal of employees 1. Manager logs into the system and his credentials are verified 2. The system provides a list of employees under him (Alternate course 1.1) 3. Manager selects employee and gives his feedback/review 4. Review the feedback of employees from peer evaluation 5. System shows the feedback and peer evaluation ratings 6. Appraisal in confirmed by the system and copy is sent to employee 7. Appraisal datastore is updated by the system		Information for Steps ← Manager’s credentials ← Employees list → Review ← Peer Review ← Peer rating ← Update employee info → Appraisals	
Alternative Course(s): 1.1 The system provides the manager the list of employees under him (occurs at step 2) 1. If any employees the manager has, is not mentioned in the system, the system will give an option to creates a new employee 2. The manager then adds the employee under him and Normal Course 4 is followed		 → Employee Details → Employee details	
Post conditions: 1. System alerts the manager if he has missed giving employees feedback 2. Feedback must be saved for future references			
Exceptions: E1: If the employee is serving his notice period, there is no need of feedback and appraisal requirement E2: New joiners (> 6 months), are excepted from appraisals.			
Summary:			
Inputs	Source	Outputs	Destination
Manager Credentials	Manager	Review	Review Datastore
Employee List	Employee Info Datastore	Appraisals	Appraisal Datastore
Peer review	Review Datastore	Employee Details	Employee Info Datastore
Update employee info	Employee Info Datastore	Employee Details	Employee Info Datastore

USE CASE - 3			
Use Case Name: Start of employment		ID: UC - 3	Priority: High
Brief Description: This use case describes the process after recruitment and updating it the system			
Actor: HR Employee			
Trigger: New recruitment of employees in the system			
Type <input checked="" type="checkbox"/> External <input type="checkbox"/> Temporal			
Preconditions: <ul style="list-style-type: none">1. Interview and selection of employees2. Approval from hiring manager for hiring employee			
Normal Course:		Information for Steps	
1.0 HR receives signed acceptance letter <ul style="list-style-type: none">1. The HR employee updates the new employee details in the system (Alternate Course 1.1)2. A login for new employee is created and a default password is generated3. All necessary documents regarding employee identity is updated in the system (Alternate course 1.2)4. A system generated email is sent to the employee with all the login details and employee agreement5. A time card file is issued to the new employee6. New employee is added to employee database		<div><div>←</div><div>New Employee Info</div></div> <div><div>←</div><div>Employee Info</div></div> <div><div>→</div><div>Employee Documentation</div></div> <div><div>→</div><div>Login details and Password</div></div> <div><div>←</div><div>Timecard file</div></div> <div><div>→</div><div>Employee Info</div></div>	
Alternative Course(s):			
1.1 All necessary documents regarding employee identity is updated in the system (occurs at step 1) <ul style="list-style-type: none">1. Archived employee account is retrieved2. Employee updates employee information		<div><div>←</div><div>Archived Employee Account</div></div> <div><div>→</div><div>Employee Info</div></div>	
1.2 All necessary documents regarding employee identity is updated in the system (occurs at step 4) <ul style="list-style-type: none">1. If required documents are not sufficient, ask for other documents for further verification2. Once provided, update them in the system. Follow Normal Course 5.		<div><div>→</div><div>Document Info</div></div> <div><div>←</div><div>Employee Documentation</div></div>	
Post conditions: <ul style="list-style-type: none">1. The new employee must confirm the login credentials sent via the system2. Employee must sign employee agreement			
Exceptions: E1: Intern employees should be added on a separate datastore			
Summary:			
Inputs	Source	Outputs	Destination
New Employee Info	HR System	Employee Documentation	Document Datastore
Employee Info	HR System	Login Details and Password	Employee Info Datastore
Timecard file	Timecard Datastore	Employee Info	Employee Info Datastore
Archived employee account	Employee Info Datastore	Employee Info	Employee Info Datastore
Employee Documentation	Document Datastore	Document Info	Document Datastore

USE CASE - 4			
Use Case Name: Payment to Employee		ID: UC - 4	Priority: High
Brief Description: This Use Case describes the process of tracking employee hours, approval of hours, and pay check processing.			
Actor: Bank Manager			
Trigger: Employee submits weekly time			
Type <input checked="" type="checkbox"/> External <input type="checkbox"/> Temporal			
Preconditions: 1.Employee worked the hours he/she entered/scheduled 2.Timecard database is online 3.Active hub account			
Normal Course 1.0 Employee logs in to hub account 1. Employee accesses time card and clocks in/out 2. Employee logs out of hub account 3. Bank Manager logs in to hub account 4. Manager accesses employee time card (Alternate Course 1.1) 5. Manager signs approved, saves and closes file 6. System subtracts taxes and benefits on a per employee basis 7. System sends to employee direct deposit account at midnight the day prior to Payday (Alternate Course 1.2) 8. System emails employee updated paystub		Information for Steps <div><div>←</div>Employee timecard file</div> <div><div>←</div>User log out of system</div> <div><div>←</div>Manager login credentials</div> <div><div>←</div>Employee timecard file</div> <div><div>→</div>Manager approved timecard</div> <div><div>←</div>Employee information</div> <div><div>←</div>Employee bank routing no</div> <div><div>→</div>Paystub</div>	
Alternative Course(s): 1.1 Manager denies timecard (occurs at step 4) 1. Employee is contacted, by email, for a revision, Normal Course 5 is followed		<div><div>→</div>Email for revision</div>	
Post conditions: 1. Timecard, paycheck, and paystub are stored for future reference 2. Timecard information is reset to 0 for the next week			
Exceptions: E1: Attempt to log in outside of the network 1. System displays message that states the user must be on site or in VPN to access account E2: Revision to timecard is necessary 1. process starts from the beginning			
Summary:			
Inputs	Source	Outputs	Destination
Employee login credentials	Employee Info Datastore	Manager approved	Timecard Datastore
Employee timecard file	Timecard Datastore	Timecard	Employee
User log out of system	HR system	Paystub	Employee
Manager login credentials	Employee Info Datastore	Email for revision	Employee Info Datastore
Employee timecard file	Employee Datastore		
Employee information	Employee Info Datastore		
Employee bank routing number	Employee Info Datastore		

USE CASE - 5			
Use Case Name: Leave Processing		ID: UC - 5	Priority: Med
Brief Description: This use case describes the system’s performance of all activities associated with determination of proper leave balance for all types.			
Actor: HR manager, Bank employee			
Trigger: Leave applied by the employee			
Type <input checked="" type="checkbox"/> External <input type="checkbox"/> Temporal			
Preconditions: 1. The bank employee should have leaves in his account. 2. The previous leaves should have been approved by the manager.			
Normal Course		Information for Steps	
1.0 The bank employee applies for the leave			
1. The bank employee logs in to the system hub and accesses the leave processing module.		← Username/Password	
2. The system displays the types of leaves with the number of leaves available in the account.		← Leave Data Details	
3. The bank employee applies for the leave.		← Leave applied	
4. The HR manager makes the decision and approves it. (Alternate 1.1)		→ Decision offered	
5. The system updates the record with the current balance.		→ Leave Balance Updated	
Alternative Course(s):			
1.1 The bank HR manager offers decision (occurs at step 4)			
1. The bank employee selects the date and applies for the leaves.		← Leave applied	
2. The HR manager rejects the leave request.		→ Decision rejected	
3. The HR manager also mentions the reason for rejection, Normal Course 5 is followed		→ Reject reason	
Post conditions: 1. The system displays low balance of leaves when the count of a leave is below 2. 2. The employee’s account gets updated.			
Exceptions: E1: Under special conditions employee can take pre-occurred leaves 1. Special leaves has to be approved by the manager			
Summary:			
Inputs	Source	Outputs	Destination
Username/Password	Bank Employee	Decision Offered	Timecard Datastore
Leave Data Details	Leave Processing Datastore	Leave Balance Updated	Timecard Datastore
Leave Applied	Bank Employee	Reject Decision/ reason	Timecard Datastore

USE CASE - 6			
Use Case Name: Employee Leaving the Company		ID: UC - 6	Priority: Med
Brief Description: This Use Case describes the process to be followed when an employee resigns at his or her discretion or is asked to leave the company			
Actor: HR employee			
Trigger: Employee leaves the company			
Type <input type="checkbox"/> External <input checked="" type="checkbox"/> Temporal			
Preconditions: 1. Notice of employee leaving the company 2. HR employee logs in to the system hub			
Normal Course 1.0 HR employee uses notice of employee leaving the company to select employee information 1. HR employee gives notice of exit to bank employee 2. HR employees processes the final pay check and stub 3. HR Employee moves the leaving employee’s information to a secure archive location 4. HR employee disables the user’s system account 5. HR employee confirms the archive file is inaccessible unless recovered to reinstate the employee later.		Information for Steps ← Notice of Employee Leaving → Paycheck and paystub file ← Employee Info → Timecard file ← Employee Info Check	
Post conditions: 1. HR employee logs out of the hub			
Summary:			
Inputs	Source	Outputs	Destination
Notice of Employee Leaving	Employee’s Manager	Paycheck and paystub file	Timecard Datastore
Leaving	Employee Info Datastore	Timecard file	Timecard Datastore
Employee Info	Employee Info Datastore		
Employee Info Check	Employee Info Datastore		

USE CASE - 7			
Use Case Name: Employee benefits		ID: UC - 7	Priority: Low
Brief Description: This use case describes the benefits bank employees can avail with a minimum exchange of forms or other documents.			
Actor: Bank Employee, HR employee, HR manager			
Trigger: Request of information and initiate action from the employee.			
Type <input checked="" type="checkbox"/> External <input type="checkbox"/> Temporal			
Preconditions: 1. The bank employee’s record should be available and up-to-date. 2. The bank employees must have their login ID and password to access the benefit module.			
Normal Course 1.0 Requesting information and initiating actions to avail the benefits 1. The bank employee searches the employee’s benefits available 2. The bank employee selects benefit 3. The bank employee provides proof for the benefit to be availed and initiates the action. 4. The system displays the confirm message for the action initiated. 5. The bank manager approves the initiated action and verifies document. (Alternate 1.1) 6. The HR manager authorizes the request initiated and verify with the data available on the record 7. System updates the record for all the employees.		Information for Steps Benefits scheme Benefit selected Document submitted Confirm message Decision made Request authorized Benefit Datastore	
Alternative Course(s): 1.1 Search request returns no results (occurs at step 1) 1. System displays message that no results were found for that search. 2. System asks the bank employees to try another search, Normal Course 2 is followed		Benefit Datastore updated	
Post conditions: 1. The system will be updated with the employee’s records. 2. The system will allow the benefits bank employees can avail with a minimum exchange of forms or other documents.			
Exceptions: E1: The interns in the organization can login to the benefit module.			
Summary:			
Inputs	Source	Outputs	Destination
Benefit Scheme Benefit selected	Benefit Datastore Bank employees	Document submitted Confirm message Decision made Request authorization Registration Benefit Datastore Updated	Bank Employee Bank Employee Bank Employee Bank Manager Bank Employee Bank Employee

USE CASE - 8			
Use Case Name: Training		ID: UC - 8	Priority: Med
Brief Description: This use case describes the training provided to the employees to achieve the organization’s goal and maintain its standards.			
Actor: Bank Employees			
Trigger: Training for the employees			
Type <input checked="" type="checkbox"/> External <input type="checkbox"/> Temporal			
Preconditions: <div>1. The bank employee should have a valid login ID/password.</div> <div>2. Training schedule for a month must be available</div>			
Normal Course:		Information for Steps	
1.0 Employee is interested to attend a training			
1. The bank employee enters the login ID and password to access the training module.		← Login Id/password	
2. The bank employee enters the search request for the training desired.		← Search criteria	
3. The system displays the matching search request along with the list of attendees. (Alternate 1.1)		← Matching request	
4. The bank employee selects a training program and can registers for it.		← Training search	
5. The bank employee selects a training program to remove it from the account.		→ Canceled request	
6. The record of the employee gets updated in the training datastore.		→ Update	
Alternative Course(s):			
1.1. The training program does not have any spot available. (occurs at step 3)			
1. The system displays “Training is full.” Normal Course 4 is followed		→ Message Displayed	
Post conditions: <div>1. The selected program can be modified.</div> <div>2. One or more training program are added to the employee’s account.</div>			
Exceptions: E1. The employees are able to attend the training program without registration.			
Summary:			
Inputs	Source	Outputs	Destination
Login ID/password	Bank employee	Canceled request	Training Datastore
Search criteria	Bank employee	Update	Training Datastore
Matching request	Bank employee	Message Displayed	User Interface
Training search	Training Datastore		

❖ **Data Dictionary :**

1. System

System			
Attribute Name	Data Type	Constraint	Default
Login_id	Varchar(15)	Not Null	char
Employee_id	Int(12)	Not Null	char
Password	Varchar(15)	Not Null	char

2. Employee Info

Employee info			
Attribute Name	Data Type	Constraint	Description
Employee_id	Int(12)	Not Null	char
Password	Varchar(15)	Not Null	char
Employee_name	Varchar(50)	Not Null	char
Dept_id	Varchar(10)	Not Null	char
Joining_date	Date		Default 0
timecard_id	Timestamp		Default 0
review_file	Varchar(50)	Not Null	char
address	Varchar(100)	Not Null	char
contact	Int(10)	Null	char
email	Varchar(20)	Null	char
SSN	Int(10)	Not Null	Default 0
Check clearing - Bank Info	Int(12)	Not Null	char

3. Peer Evaluation

Peer Evaluation			
Attribute Name	Data Type	Constraint	Description
Review_id	Varchar(15)	Not Null	char
Dept_id	Varchar(10)	Not Null	char
Review_type	Varchar(20)	Not Null	char
Review_timeStamp	Timestamp		Default 0
Employee_id	Int(12)	Not Null	char
Notification	Varchar(50)	Null	char
Review_report	Varchar(100)	Not Null	char
Peer rating	Int(10)	Not Null	Default 0

4. Manager Appraisal

Manager Appraisal			
Attribute Name	Data Type	Constraint	Description
Manager_id	Varchar(15)	Not Null	char
Review_id	Varchar(15)	Not Null	char
Review_type	Varchar(20)	Not Null	char
Review_timeStamp	Timestamp		Default 0
Employee_id	Int(12)	Not Null	char
Dept_id	Varchar(10)	Not Null	char
Notification	Varchar(50)	Null	char
Review_report	Varchar(100)	Not Null	char

5. Leave Processing

Leave Processing			
Attribute Name	Data Type	Constraint	Default
Leave_id	Int(12)	Not Null	char
Employee_id	Int(12)	Not Null	char
Time card	Timestamp	Default 0	Default 0
Manager Approval	Varchar(20)	Not Null	char
Balance_Leave	Int(10)	Not Null	Default 0
Leaves_acquired	Int(10)	Not Null	Default 0
Leaves_reason	Varchar(100)	Not Null	char
Reject_leave	Varchar(100)	Not Null	char

6. Termination

Termination			
Attribute Name	Data Type	Constraint	Default
Termination id	Int(10)	Not Null	char
Employee id	Int(12)	Not Null	char
Notice_exit	Varchar(20)	Null	char
Paycheck	Int(10)	Not Null	Default 0
Reason_exit	Varchar(100)	Not Null	char
Paystub	Varchar(50)	Not Null	char
timecard	Timestamp	Not Null	Default 0

7. Payment Info

Payment Info			
Attribute Name	Data Type	Constraint	Default
Payment_id	Varchar(15)	Not Null	char
Employee_id	Int(12)	Not Null	char
Pay_check	float(8)	Default 0	Default 0
Pay_stub	Varchar(100)	Not Null	char
Manager_approval	Varchar(50)	Not Null	char
timecard file	Timestamp	Default 0	Default 0
Taxes - Deductions	Varchar(50)	Null	Default 0
Benefits - Deduction	Varchar(50)	Null	Default 0
Check clearing - Bank Info	Int(12)	Not Null	Default 0
Status_id	Varchar(20)	Not Null	char

8. Benefits

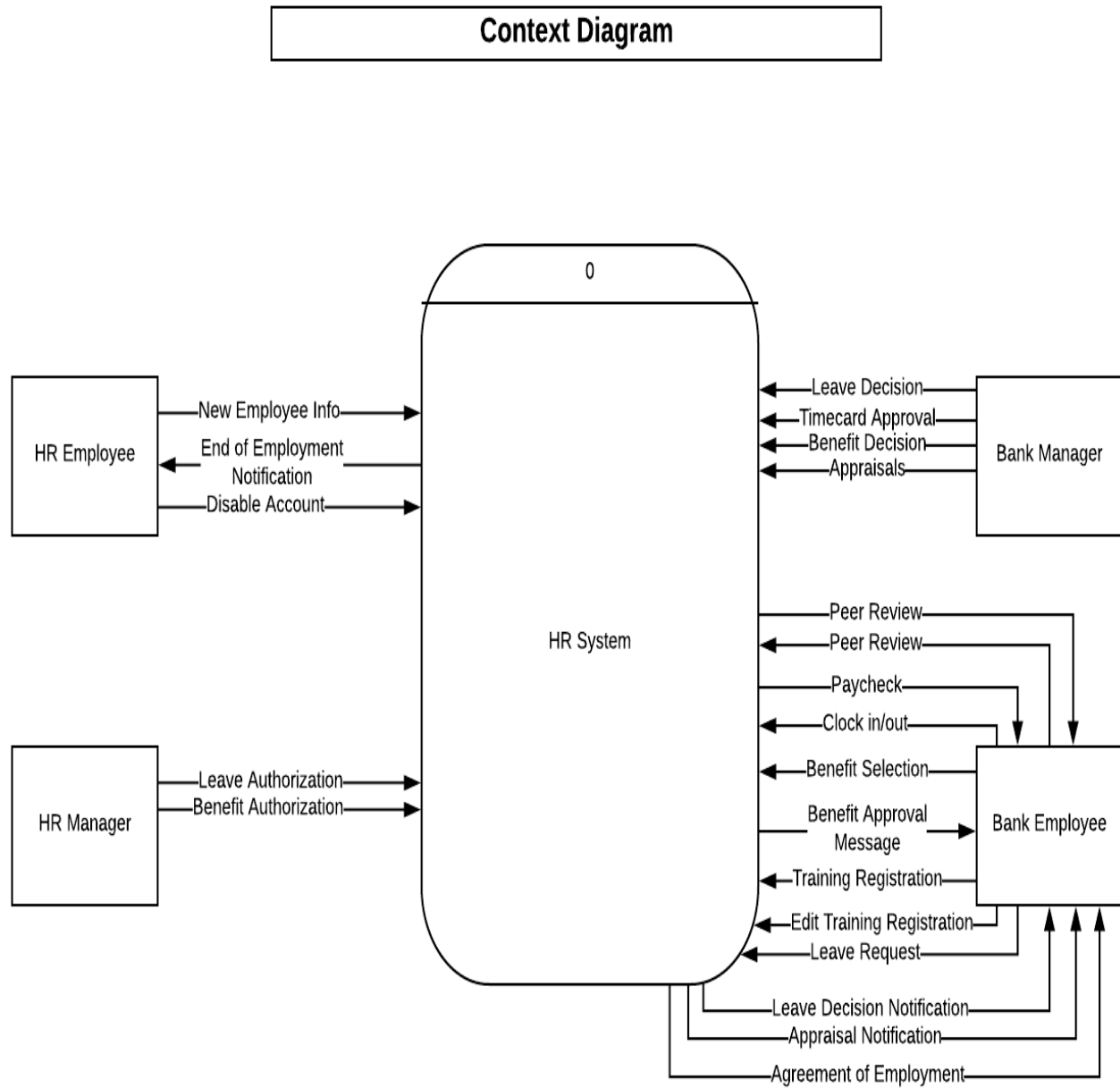
Benefits			
Attribute Name	Data Type	Constraint	Default
Benefit_id	Varchar(15)	Not Null	char
Employee_id	Int(12)	Not Null	char
Benefit_type	Varchar(20)	Not Null	char
Benefit_deduction	Varchar(50)	Null	Default 0
Benefit_status	Varchar(20)	Not Null	Domain -> Active, Pending, On Process

9. Training

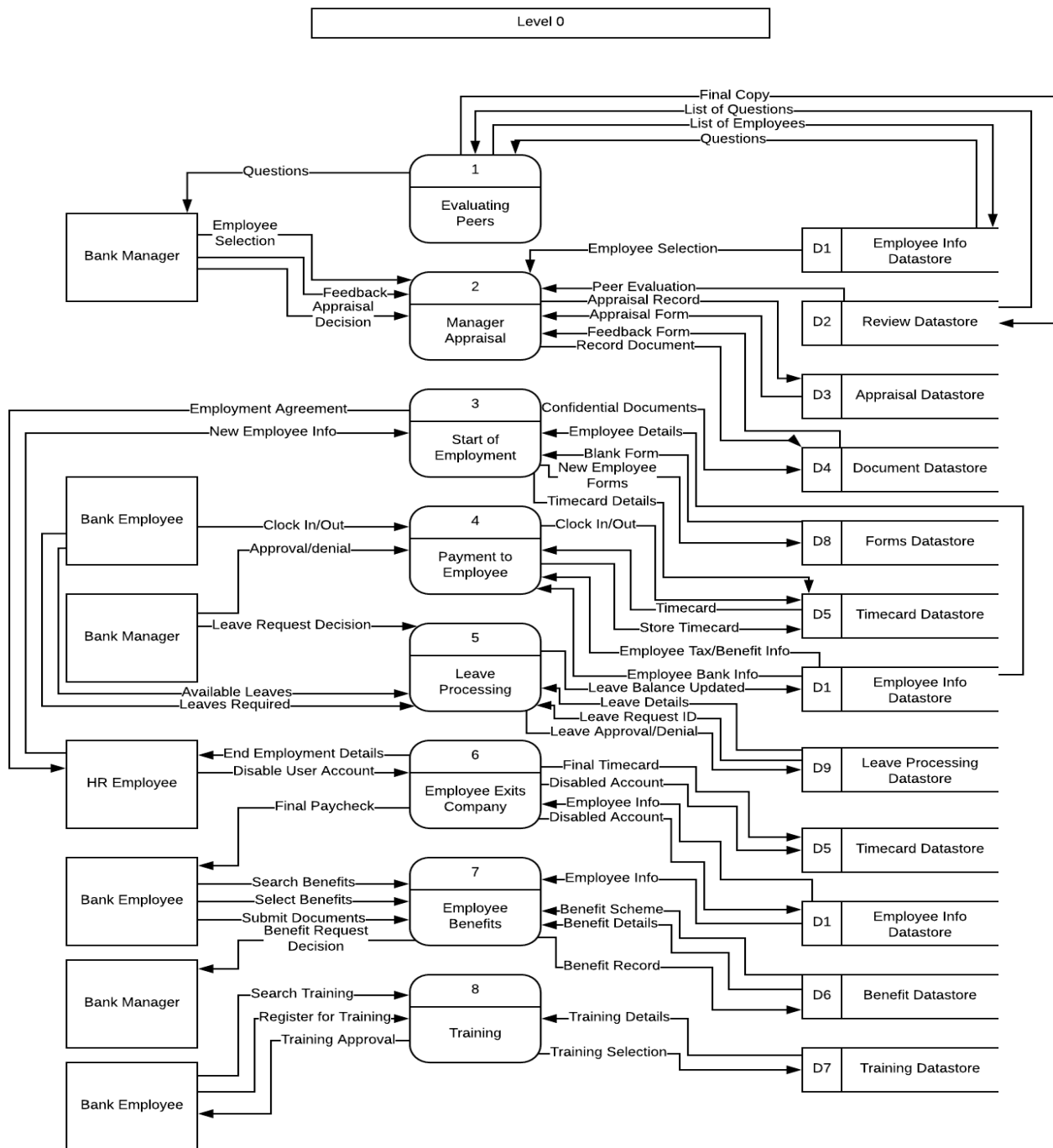
Training			
Attribute Name	Data Type	Constraint	Default
Training_id	Varchar(12)	Not Null	char
Employee_id	Int(12)	Not Null	char
Training_type	Varchar(20)	Not Null	char
Training_date	Date	Not Null	char
Spots_available	Int(10)	Not Null	Default 0
Training_notofication	Varchar(30)	Null	char
Maximum_Attendees	Int(100)	Null	Default 0
Minimum Attendees	Int(100)	Not Null	Default 0

❖ **Data Flow Diagram:**

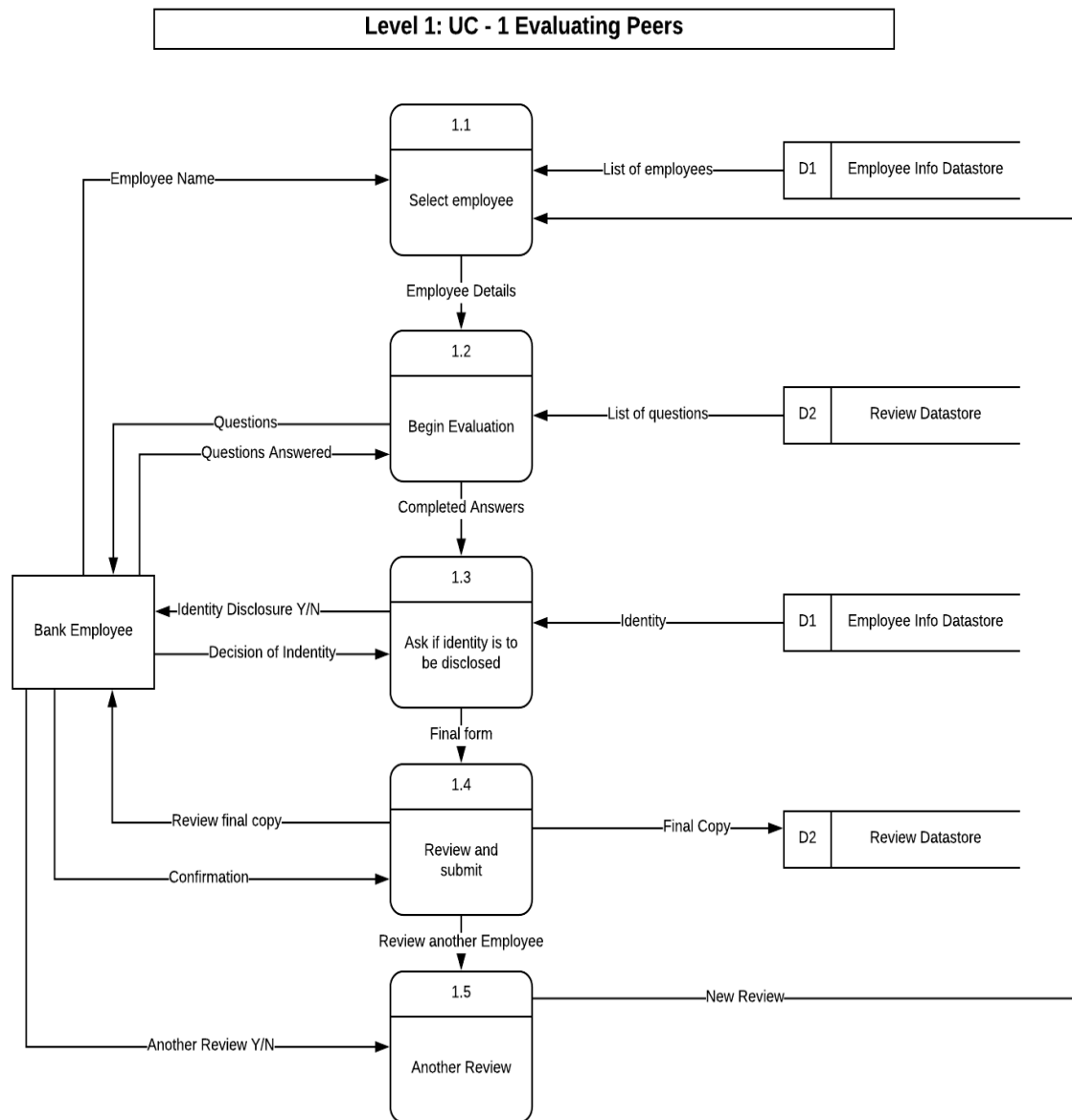
CONTEXT DIAGRAM

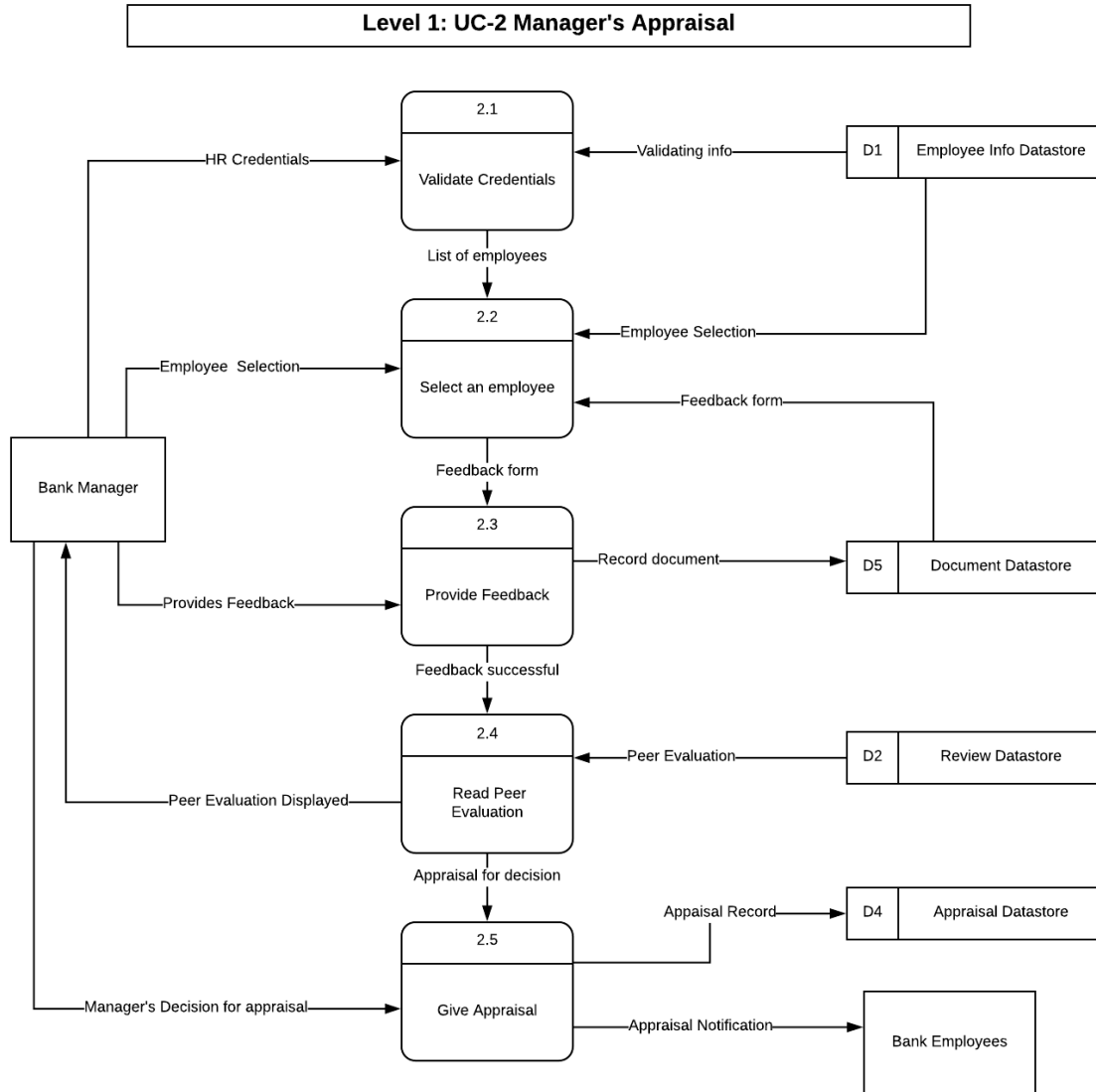


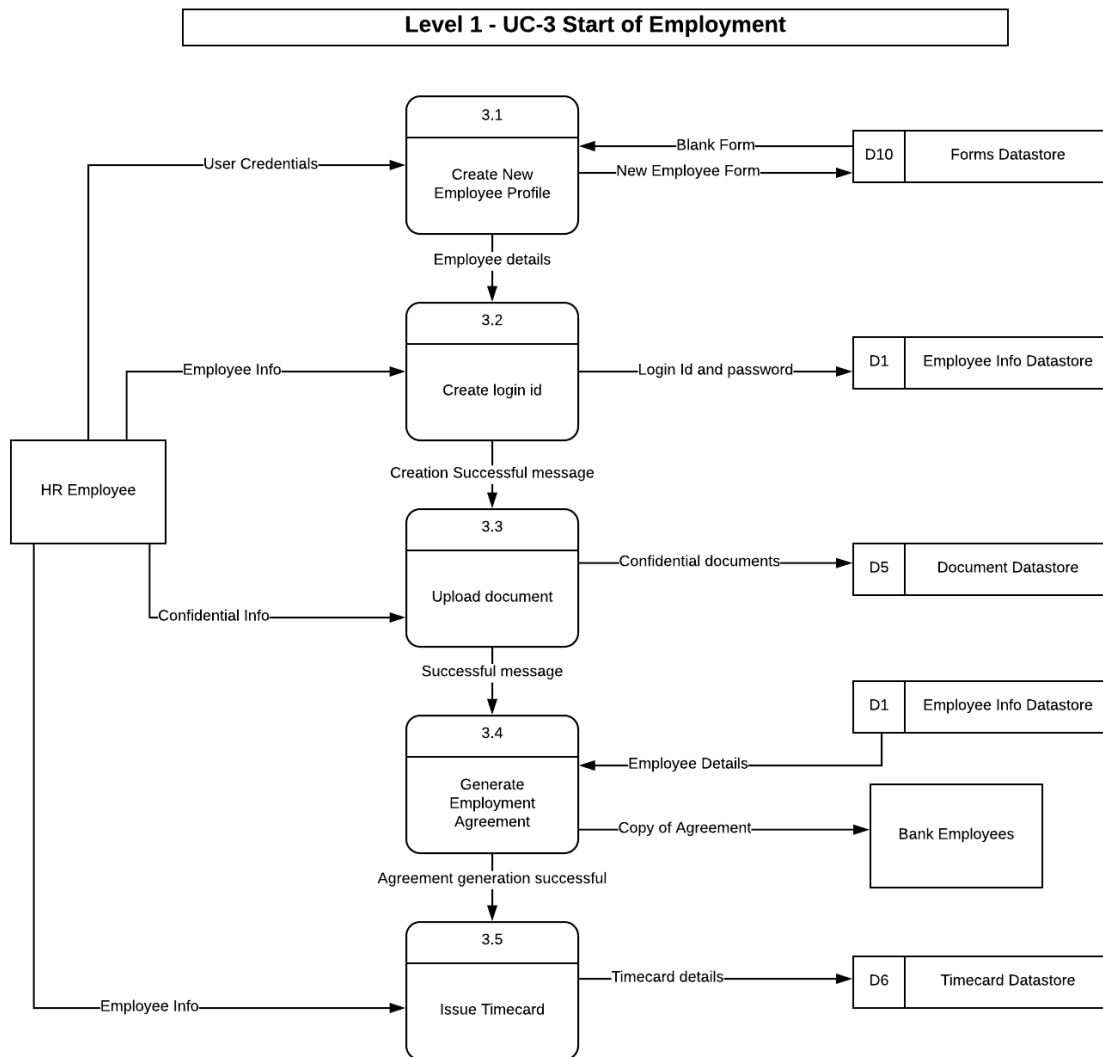
LEVEL 0 DIAGRAM



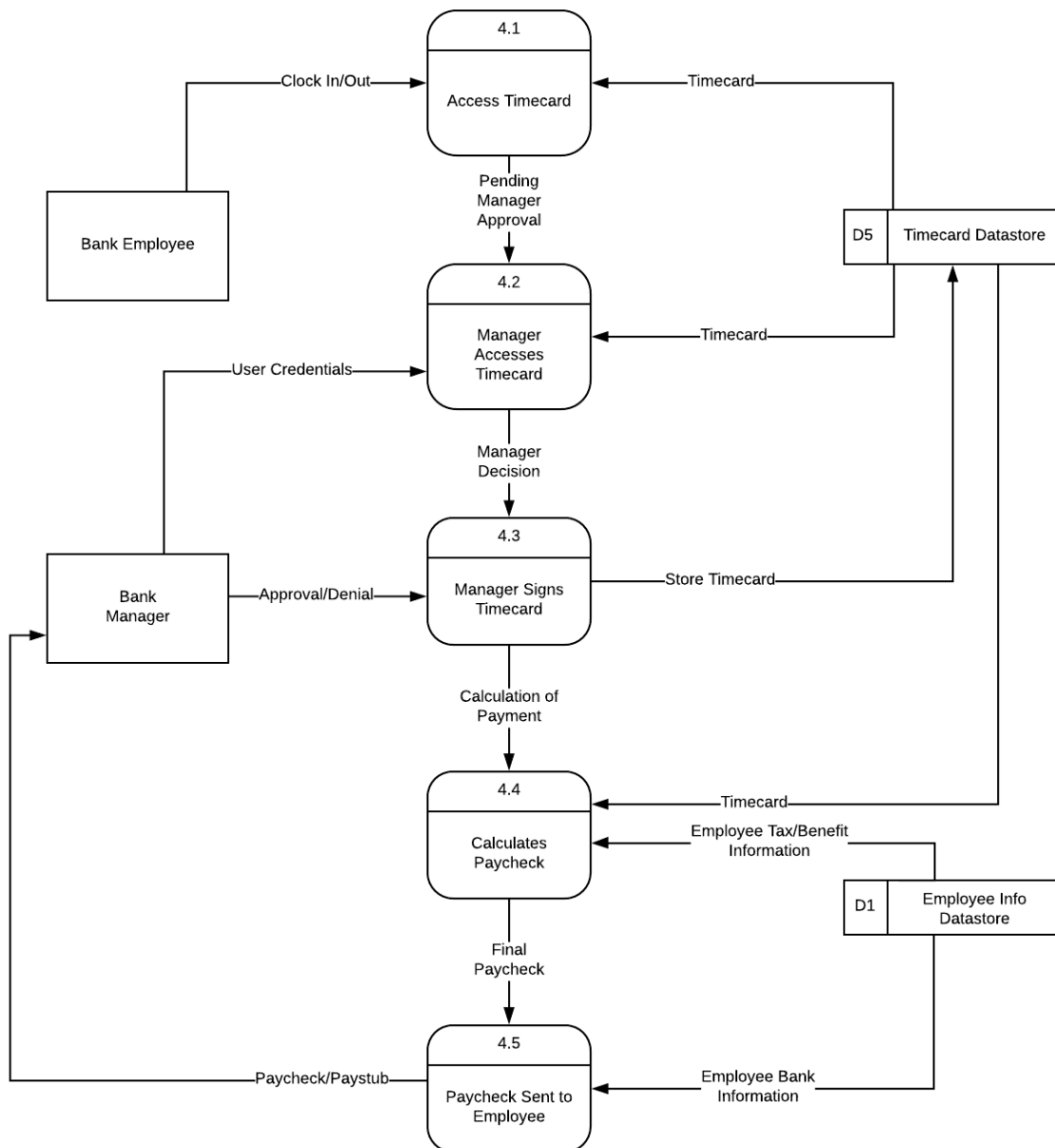
LEVEL 1 DIAGRAM



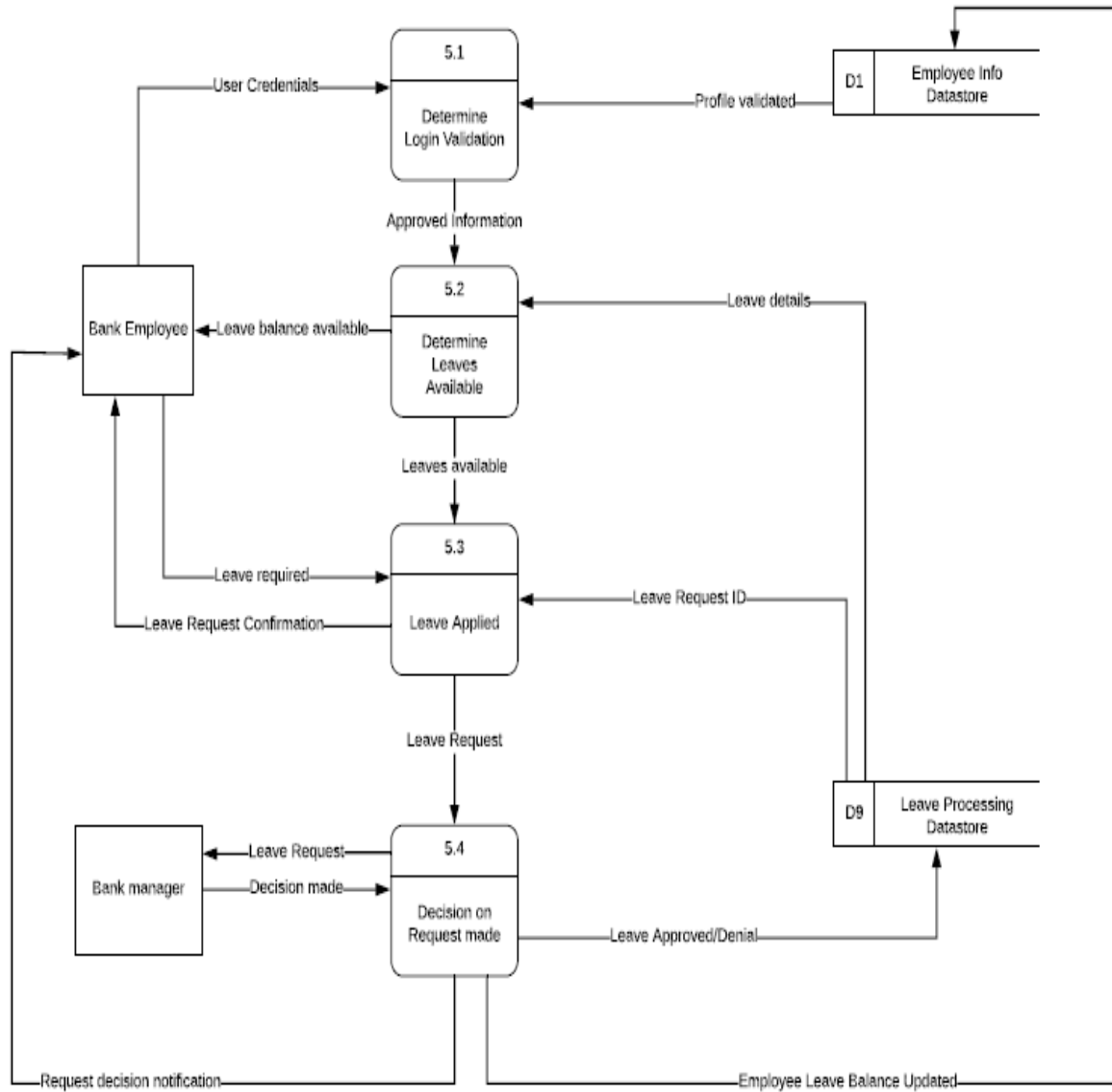




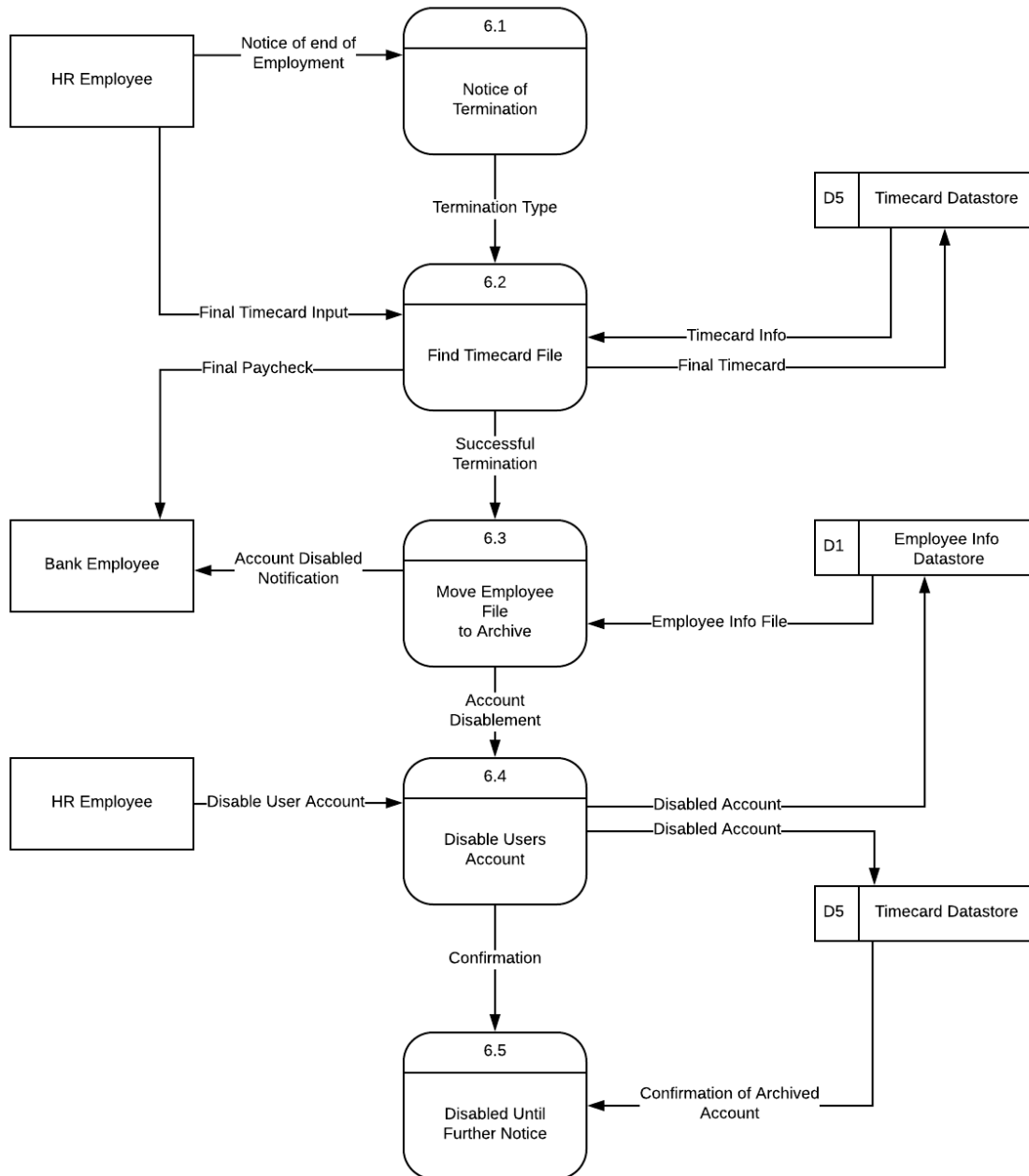
Level 1: UC-4 Payment To Employee



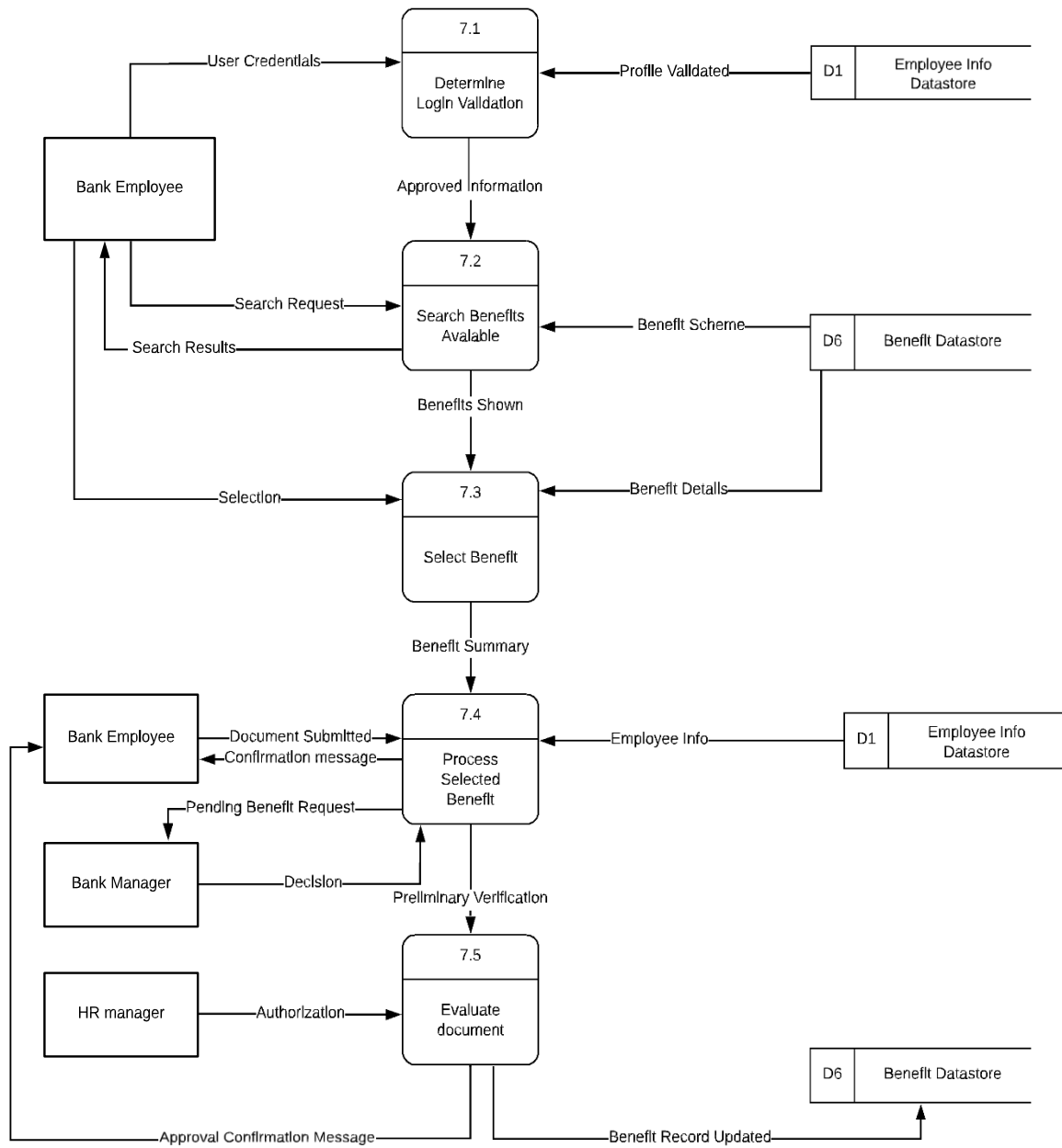
Level 1 : UC - 5 Leave Processing



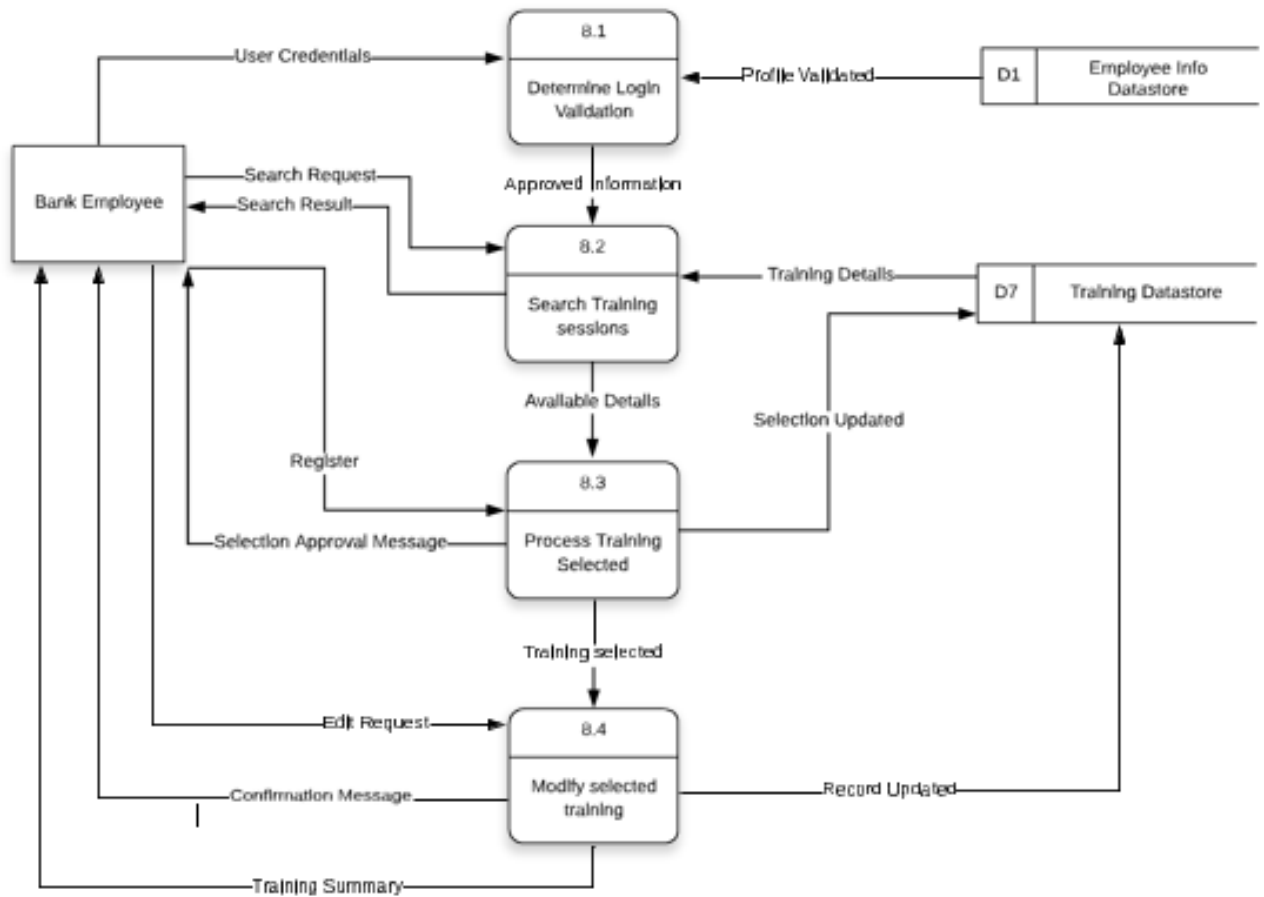
Level 1: UC-6 Employee Leaving the Company



Level 1: UC 7 Employee Benefits

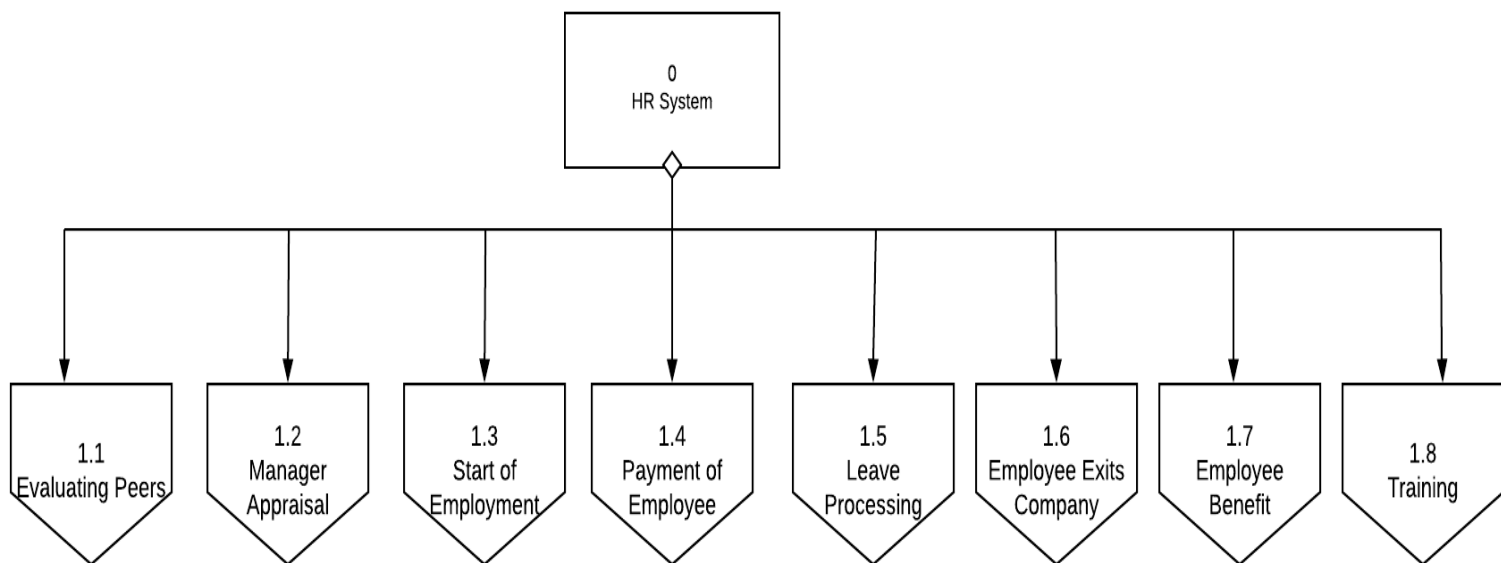


Level 1 : UC - 8 Training

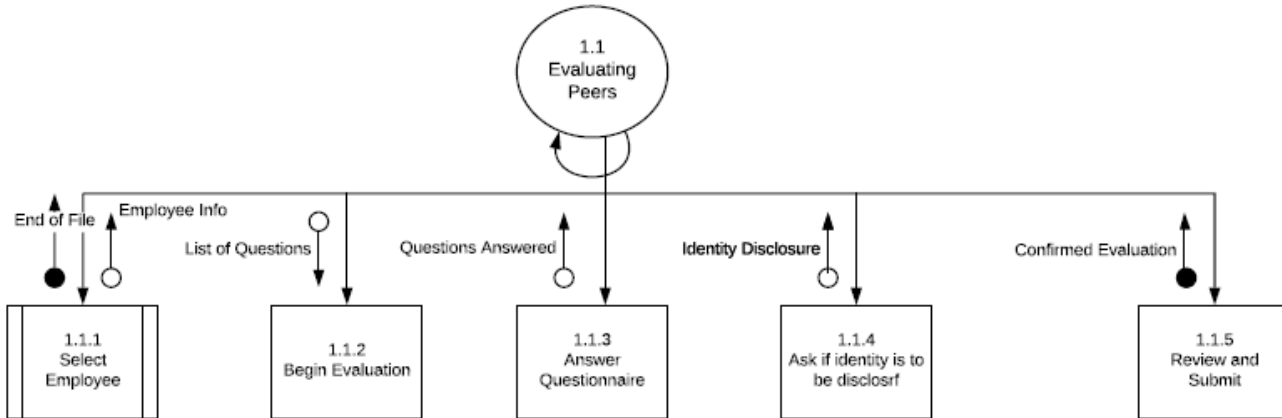


❖ **STRUCTURE CHART:**

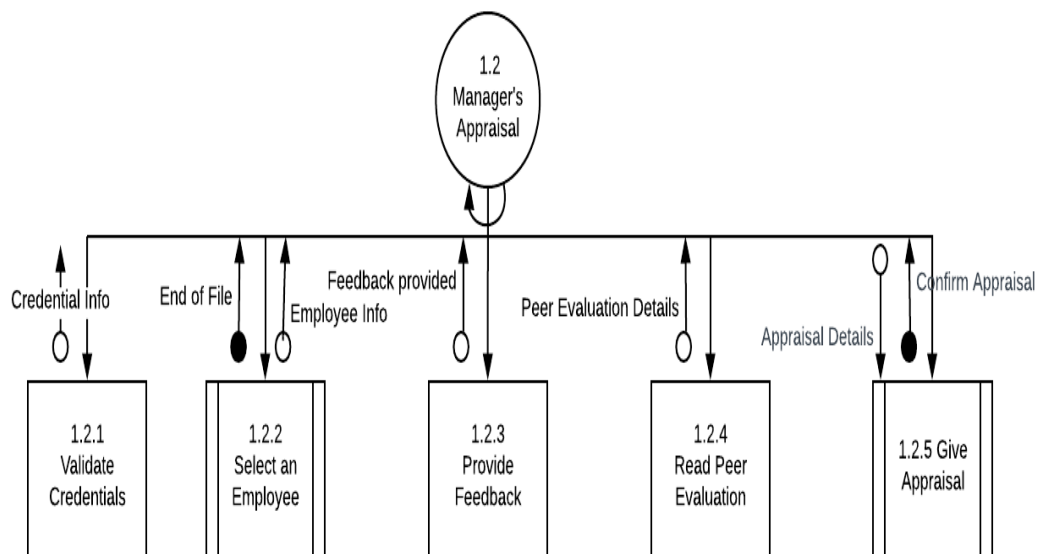
Structure Chart : From Context Diagram and Level 0 DFD Diagram



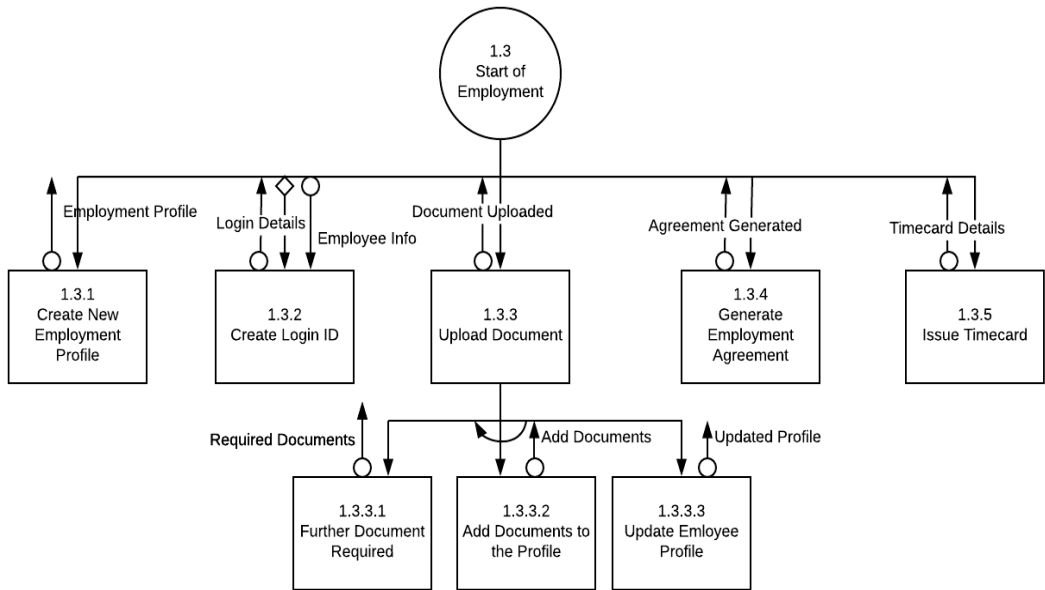
Structure Chart : From Level 1 Diagram



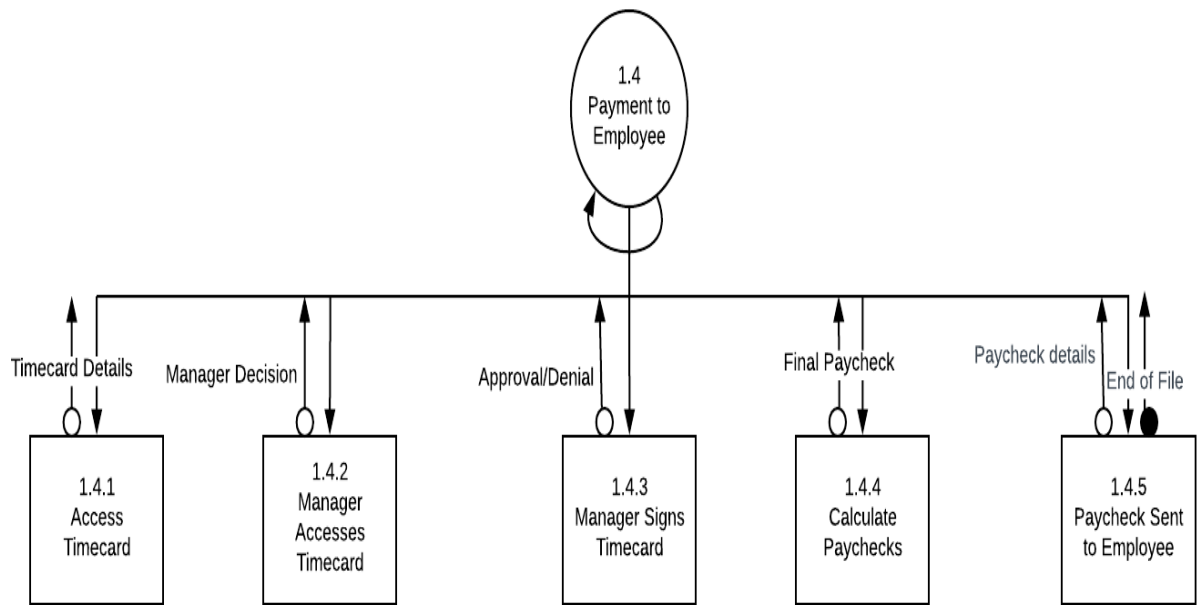
Structure Chart : From Level 1 Diagram



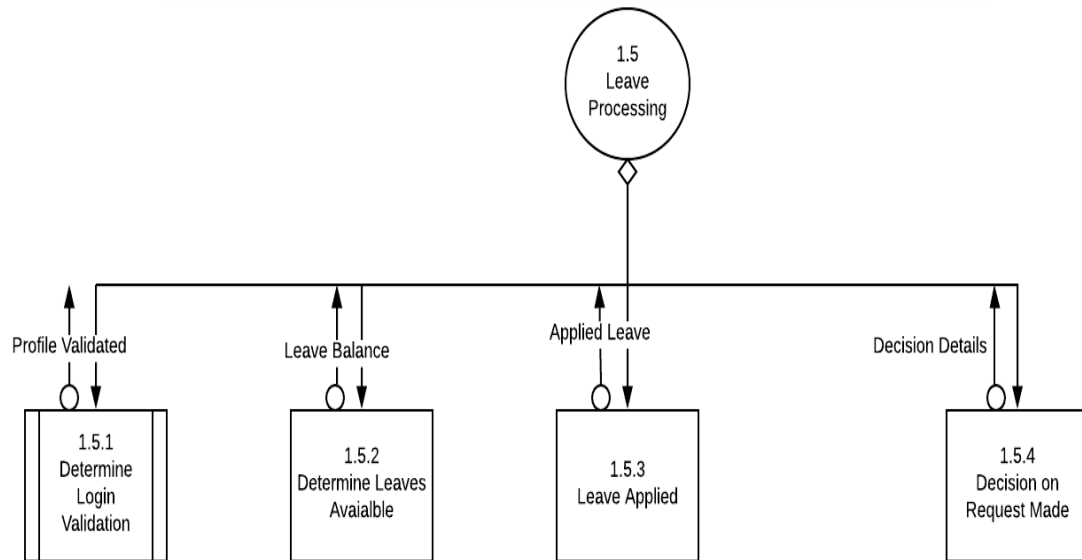
Structure Chart : From Level 1 Diagram



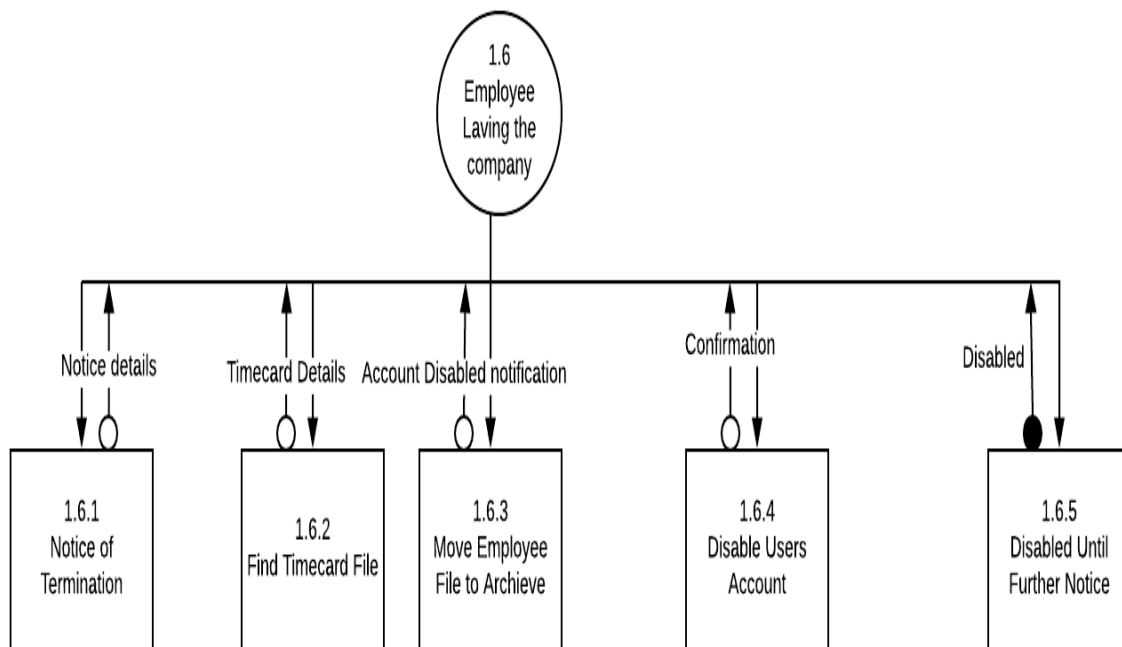
Structure Chart : From Level 1 Diagram

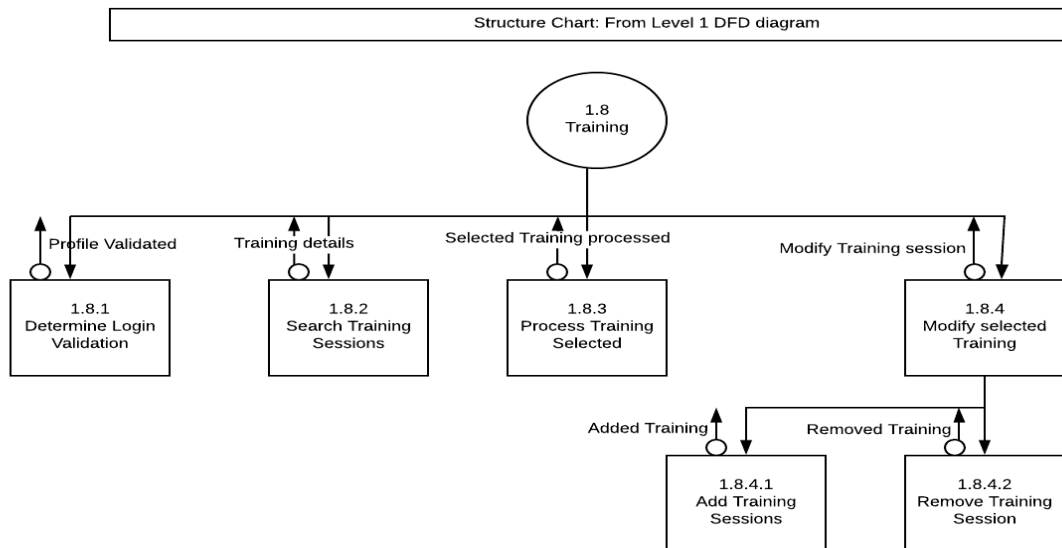
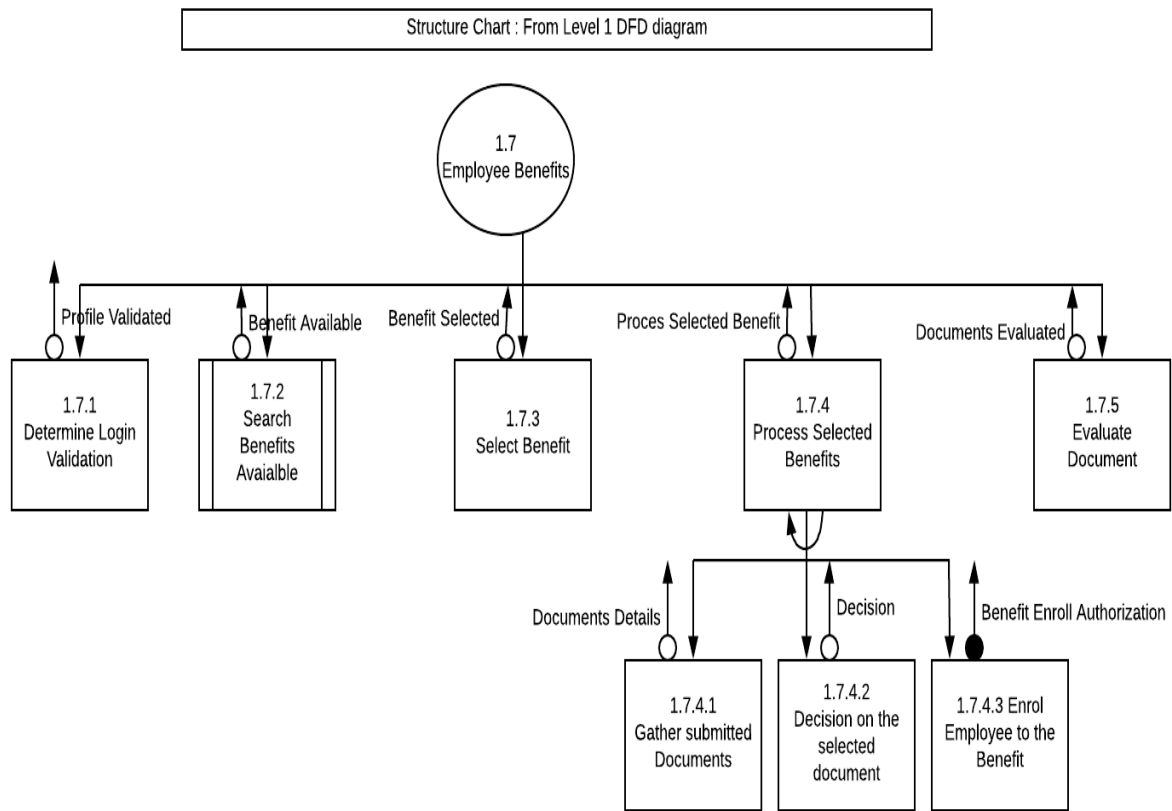


Structure Chart : From Level 1 Diagram



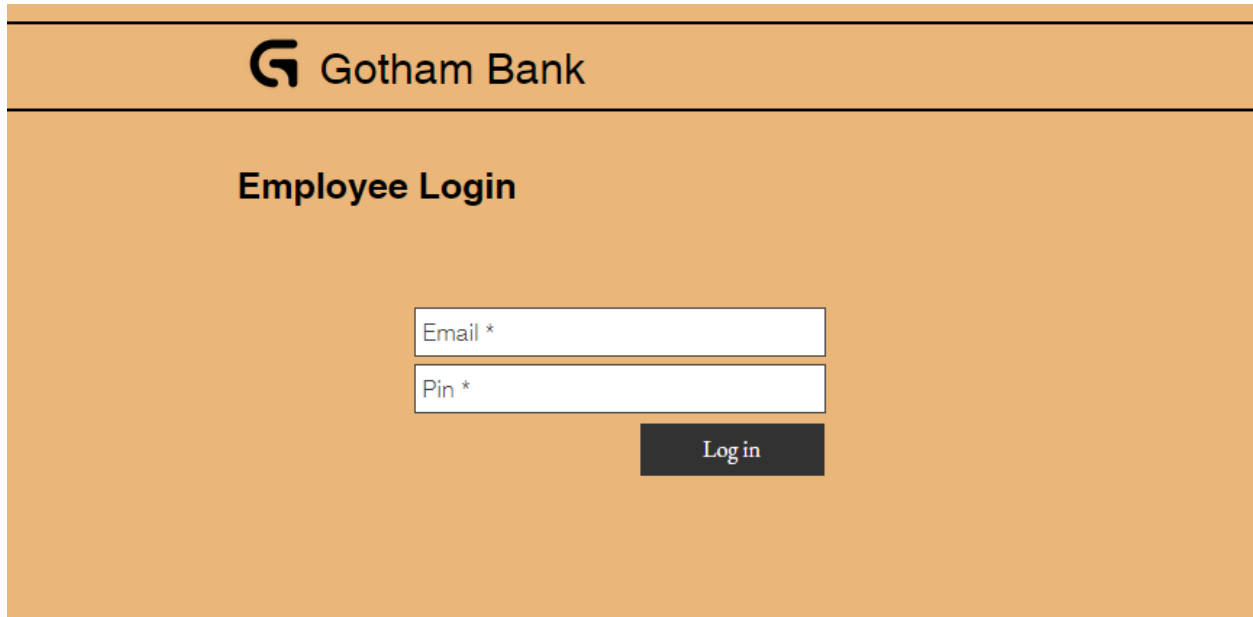
Structure Chart : From Level 1 DFD diagram





❖ User Interface Design

Website Main Page



The image shows the main page of the Gotham Bank website. At the top, there is a header bar with the Gotham Bank logo and name. Below the header, the page title "Employee Login" is centered. The login form consists of two input fields: "Email *" and "Pin *". Below these fields is a "Log in" button.

Gotham Bank

Employee Login

Email *

Pin *

Log in

Employees Logs in by putting his email and password



The image shows the same Gotham Bank Employee Login form as above, but with sample data entered. The "Email *" field contains "jsmith@gothambank.com" and the "Pin *" field contains "*****". The "Log in" button is still present.

Gotham Bank

Employee Login

jsmith@gothambank.com

Log in

Employee Home Page, upon successful log in




USER INTERFACE

Employees applying for leave

The screenshot shows the Gotham Bank Leave Request Form. The header features the Gotham Bank logo and a 'Home' link. A 'Home' and 'Logout' button is located in the top right corner. The main content area contains a 'Leave Request Form' with the following fields: 'Email' (jsmitha@gothambank.com), 'Type' (Casual), 'Start Date' (4/12/2018), and 'End Date' (4/12/2018). A 'Submit Request' button is located at the bottom right of the form.

Manager Logs in to approve/reject leave

 **Gotham Bank** Home

Home Logout

Leave id - 12323

From - John Smith


Leave Type - Casual

From - 4/12/2018

To - 4/12/2018


For Scheduling Training

Employee visits the training page

 **Gotham Bank** Home

Home Logout

Schedule Training




Improve Productivity With Our
Teller Training

Mar 21 - 09:00 AM

Available Spots: 0

Maximum Spots: 30




Training and Empowerment
CUSTOMER SATISFACTION

Apr 11 - 11:00 AM

Available Spots: 7

Maximum Spots: 30



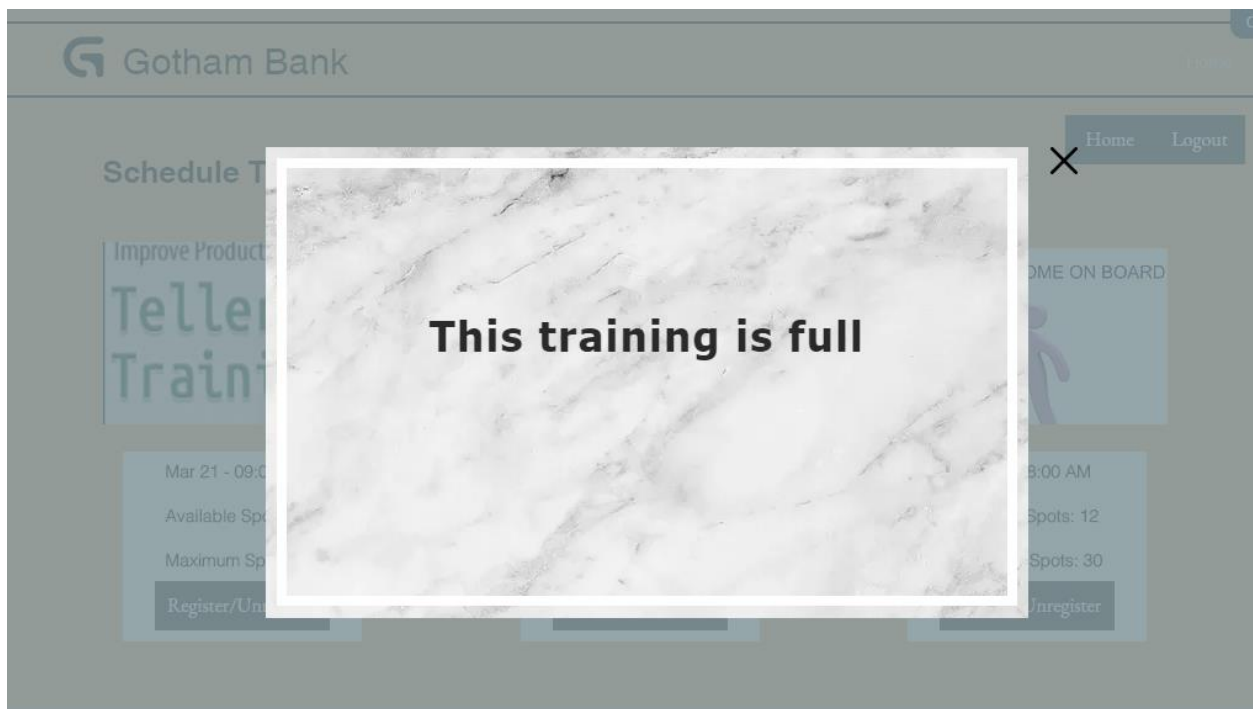
WELCOME ON BOARD

Apr 15 - 08:00 AM

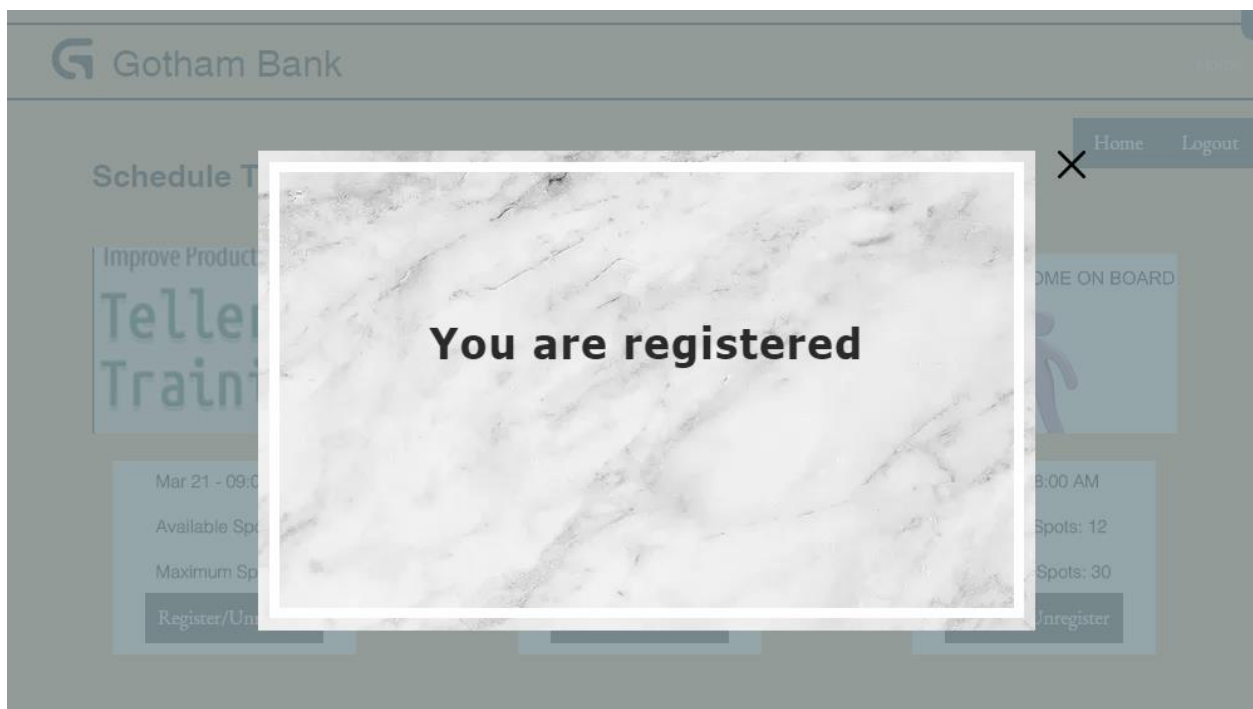
Available Spots: 12

Maximum Spots: 30


If employee registers for a training that is full



Upon successful registration




After successful registration, the available slots decrease.

 **Gotham Bank**


Home

HomeLogout


Schedule Training



Mar 21 - 09:00 AM
Available Spots: 0
Maximum Spots: 30
[Register/Unregister](#)



Apr 11 - 11:00 AM
Available Spots: 6
Maximum Spots: 30
[Register/Unregister](#)



Apr 15 - 08:00 AM
Available Spots: 12
Maximum Spots: 30
[Register/Unregister](#)

Employee Logs Out

 **Gotham Bank**

Home

HomeLogout

Schedule Training

❖ **Future Scope:**

In the future we plan to implement few more functionalities which will further make the manager and employment interaction easier and transparent. Each user will be given a Request ID on the submission of his/her request, from which they can track the current status of it and at which level of hierarchy it has reached. They can also be notified about it through text/mail. Anytime the employee feels the need to raise the voice about any concern in the organization/team, they can write an anonymous mail through a portal desired to be launched in the future “RaiseVoice” to the reporting manager. Further, in the benefits section the users will get the option to choose any health insurance carrier out of the list of authorized carriers of the organization. In addition to that, they can also avail full coverage of their dependent parents under any health insurance scheme. System should check the status of the insured members and notify them of the premium payments. System should provide the users different payment gateways as modes of payment for the insurance premium.

❖ **Conclusion:**

As the world’s largest and most complex enterprise, Gotham Bank faced tremendous challenges in the employment and payment of a large workforce including hundreds of thousands of people worldwide. These enormous responsibilities involved the management of billions of dollars of resources, and posed tremendous challenges. There realized a need to automate the human resource payroll and other benefits for the employees.

The HR Information System of Gotham Bank provides the employees and management the ability to evaluate the other employees and analyze information quickly and accurately by the managers in order to make the workforce easy to manage. It creates central hub for employees to access evaluations, pay stubs, trainings and benefit options. Thereby, providing the management access to new hire packets and termination papers, allow employees to manage their own benefits, such as requesting information and initiating actions, with minimum exchange of forms or other paper documents. The bank manager and the HR manager gets the access to the datastore containing the employee’s record to authorize and validate the request. The system is designed to comply with the standard and regulatory requirements when processing any type of request. The personal information of the employees are also kept confidential and data security is maintained at all the levels. This eliminates the need to hire a third external management party.