

PROJECT REPORT ON:

**HUMAN RESOURCES INFORMATION
SYSTEM**

(EasyWorks)

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Table of Contents

Introduction	2
Why do we need this system?	2
What is its business value?	3
Requirements Definition	4
System Request – Human Resources Information System.....	4
Functional Requirements – Process Oriented Requirements.....	5
Functional Requirements – Information Oriented Requirements.....	9
Non-Functional Requirements	10
Use Cases	11
Use Case 1: Start Employee Onboarding.....	11
Use Case 2: Set User Profile.....	12
Use Case 3: Enroll in Benefits	13
Use Case 4: Manage Payroll	14
Use Case 5: Take Training	15
Use Case 6: Request Time off.....	16
Use Case 7: Track Project Timeline	17
Data Flow Diagrams	18
Context Diagram.....	18
Level 0 DFD	19
Level 1 DFD	20
Start Employee onboarding.....	20
Set User Profile	21
Enroll in Benefits	22
Manage Payroll	23
Take Training	24
Request Time-off.....	25
Track Project Timeline.....	26
Structure Chart	27
Data Dictionary	28
Gantt Chart	32
Output Results	33
Future Scope	37

Introduction

A **human resources information system** (HRIS) is a form of human resources (HR) software that combines a number of systems and processes to ensure the easy management of human resources, business processes and data. Human resources software is used by businesses to combine a number of necessary HR functions, such as storing employee data, managing payrolls, recruitment processes, benefits administration, and keeping track of attendance records.

A human resources management system ensures everyday human resources processes are manageable and easy to access. It merges human resources as a discipline and, in particular, its basic HR activities and processes with the information technology field, whereas the programming of data processing systems evolved into standardized routines and packages of enterprise resource planning (ERP) software. On the whole, these ERP systems have their origin from software that integrates information from different applications into one universal database. The linkage of its financial and human resource modules through one database is the most important distinction to the individually and proprietarily developed predecessors, which makes this software application both rigid and flexible.

Why do we need this system?

Modern business practice requires an integrated human resource system to replace manual processes for the operational control of employee relations. This has resulted in reduced labor requirements and administrative processes. The corresponding increase in productivity due to centralized computing streamlines operations and assists managers to focus on more mission critical aspects of human resource management. Although paperwork hasn't been totally reduced, human resource managers can now spend more time on core business objectives as opposed to attending to minor administration tasks.

The HR software system is necessary for companies of all sizes, whether they operate locally or globally. Keeping track of labor, forecasting labor requirements, facilitating day to day employee management and providing financial reporting to the accounting department are essential components to company operations. The traditional manual system which involved voluminous paperwork is found to be tedious to store and use in a modern business organization. Adding to that, the data needs to be updated regularly which makes clerical job exhausting and costly. There is also a very high probability of error when data is transferred from one record to another which

decreases its reliability and accuracy. With the ability to cut costs, save time and increase productivity, an HR system is an investment that companies will long reap benefit from.

What is its business value?

No business can run without the talents of the people. So it's absolutely vital that the organization hires the right people for it which can help in maximizing profit. Having an HRIS can help to automate the recruitment work. The more engaged employees are, the more productive they will be, which translates to higher retention rates and more profit over time.

The value of a business cannot always be measured in terms of dollars or cents of profit. The broader business values HRIS aims to achieve are: efficient learning management system, less stress, better HR service delivery and higher morale.

Requirements Definition

System Request – Human Resources Information System

Project Sponsor: AnaSol Inc.

Business Requirements: Using the ‘Human Resource Information System’, companies will be able to have an automated system which is central to all the human resource functions. The companies will no longer have to use multiple applications to manage employee operations and will be able to perform multiple transactions and view reports in a hub like application. The ‘Human Resource Information System’ should include:

1. Allow employees to enter/update their personal information, upload documents in the employee database. Also employees can set goals at the beginning of the review period.
2. Sort job applications with the help of a software to ease the recruitment and onboarding process for the hiring managers.
3. Allow employees to go through training information and acknowledge being trained.
4. Allow employees to submit time off requests and managers to approve/reject them.
5. Allow employees to view information regarding payroll which includes gross pay, net pay and the tax deductions.
6. Allow employees to enroll and manage benefits including insurance, 401(k), transit and parking.
7. Allow employees to track and visualize the project workflow timeline.

Functional Requirements – Process Oriented Requirements

Recruitment and onboarding

1. The system will allow the selected candidate to electronically accept the offer using e-signature.
2. Integrated conversion of applicant details into New Hire employment record.
3. The system will be able to integrate with third-party screening services including criminal background check and drug testing.
4. The system will allow new employees to login into the employee portal using the credentials assigned to him when the offer letter has been accepted.
5. The system will provide an interactive portal for the new hires with a wizard based checklist of activities that employees need to perform to complete the onboarding process (Ex. Verify address, update EEO information, submit tax forms)
6. The system for electronic signature and acknowledgement of company's policies.
7. The system should allow HR managers to track the new hire's progress with set disposition codes : Not started, In-progress, Submitted, Completed.
8. The system will provide Onboarding workflows that will automatically notify required departments, such as IT and payroll, of pending new hires.

User Profile Management

1. The system should generate and/or record a unique identifier for each employee. (other than social security number)
2. Employees are able to enter, update, and check basic details that need to be maintained in order to formulate and review personnel policies and procedures.
3. Employees are able to add personal attributes, such as demographic information and company required identity proofs that are needed to be recorded as per the law (SSN, passport).
4. When personnel data is changed, the system will trigger functionality in other HR modules.
5. The system should allow the employee to set goals and track them for a review period.
6. Employees should be asked to enter emergency contact information.
7. The system should analyze resources based on different demographic locations. E.g. If the company supports diversity, this information can be used to analyze nationality of the employee
8. The system should store basic details of all the employees for future references.

Benefits

1. The system should allow employees to self-enroll in the benefits plan according to their needs.
2. The system should allow employees to view personal benefit information such as pension plans, insurance and 401(k) plans.
3. If triggered, the system should be able to make benefits deductions automatically from the employee payroll.
4. The system should facilitate third party electronic transmission of data to different benefit carriers.
5. The system should keep an accessible history of all benefits.
6. The system should provide recommendations for benefits plans based on employee profile and top benefits plan.
7. The system should allow employees to keep track of their retirement plan.
8. The system should help and create long-term benefits strategy for the company.
9. Employees are able to file disability rights.
10. Employees are able to keep track of disability approval/denial requests.
11. Employees can apply for parking permits/daily-commuter' benefits.

Payroll

1. The system must notify the employee to fill the W-4 form.
2. The system allows the employees to select the payroll schedule whether the salary is paid weekly, bi-weekly or monthly.
3. The system links the time and attendance tracking to the payroll so that hours worked can be seamlessly imported into the payroll system.
4. The system allows the employees to view their pay slip which includes gross amount and net amount.
5. The system enables the employers to withhold the correct amount of taxes from each employee's paycheck.
6. The system notifies the employees to file the employer federal tax returns quarterly.
7. The system will generate necessary reports with respect to tax filing which can be viewed and filled by the employees.

Training

1. Every time a new training is assigned to the employee, the system notifies the respective employee.
2. If the training has an expiry date, then the system notifies the respective employees with the expiry date information.

3. The system allows employees to view all the assigned training to them.
4. The employees go through training information.
5. If the training has configured questions, then the employee is able to answer training questions.
6. If the training has configured training attempts, then the employee is able to view left training attempts.
7. If the employee fails at all the attempts, then the system notifies its manager.
8. If the employee fails to go through training prior to training expiry, then the system notifies its manager.
9. If the employee fails at all attempts or does not go through training prior to training expiry then the system allows the managers to set new training attempts and new expiry date.
10. If the training is open for registration, then the employee is able to register for such training(s).
11. On completion of training, the employees are able to enter their epassword and mark the training as completed.
12. Employees are able to mark the training as completed.

Time off request

1. The employee views the balance of each time off type (PTO, sick leave and jury duty).
2. The employee selects time off type.
3. The employee selects past, current and future dates from the past 1 month to future 1 year.
4. The employee selects time off for half or full day.
5. The employees enter comments for the time off request.
6. The employee submits time off requests.
7. On submission of time off request (based on time off type), the system notifies the employee's manager that they have a time off request from their employee.
8. On approval or rejection of the request, the system notifies employees with the status in the email.
9. The managers approves or rejects time off requests.
10. The manager enters comments before approving or rejecting the request.

Timeline Tracker

1. Employees view a list of all the ongoing projects.
2. Employees view the project's start and end date.
3. Employees search for projects in the system.
4. For the entered keyword, the system shows a list of projects.
5. Employees mark projects as favorites.

6. Employees are able to switch to favorites tab to view favorite projects only.
7. Employees are able to set monthly notification alerts.
8. Employees are able to request to view the timeline chart.
9. The system shows project timeline graphically.
10. Employees are able to download project details in pdf format.

Functional Requirements – Information Oriented Requirements

1. The goals set by the employees for each review period is stored in the system and can be viewed by both the employees and their supervisors.
2. The system also stores the ratings and comments provided by the supervisor on the employees' overall performance in the employee database.
3. The system stores the time and attendance of every employee.
4. The system stores the pay slip for every employee in the payroll database.
5. The system must store training material and its configuration in the database.
6. The system must retain training completion of the employee for 3 years.
7. The system should store date-time information when the employee completes training.
8. The system should store the number of attempts employees took to answer training questions.
9. The system must retain time off request history of the employee for 5 years.
10. On approval or rejection of the request, the system should store date-time information when and who approved or rejected the request.
11. On approval of the request, the system should update time off balance based on time off type.
12. The system should retain the information of all the applicants who have applied for a new job.
13. The system will retain the forms completed by the employee at the time of onboarding.

Non-Functional Requirements

Operational

1. The Human Resource website should be able to run on any web browser(Google chrome, Mozilla Firefox etc)
2. The system can run on handheld devices.
3. The system should be able to integrate with the existing HR system.
4. The system should connect to printers wirelessly.

Performance

1. The system must be available 24 hours a day throughout the year.
2. The system must be able to support all the employees simultaneously.
3. The system must update the pay slip for every employee the day before they receive the salary.
4. The system supports 1000 users at a time during the business hours 9am-5pm and 750 users at all other times.
5. Any interaction between the user and the system should not exceed 2 seconds.

Security

1. If the employee has forgotten his/her login credentials (password), the link to reset the password should only be sent his/her registered email ID.
2. Only direct supervisors can access personal records of the employees.
3. The system enables the employees to review only their own accounts.
4. The employees can track time and attendance during business hours.
5. The system includes all available safeguards from viruses, worms, Trojan horses, etc.

Cultural and Political

1. The system exists in various languages for global employees (Spanish, French, German etc)
2. Company policy says that all computer equipment is purchased from Apple.
3. Employee personal information is protected in compliance with the Data Protection Act.

Use Cases

Use Case 1: Start Employee Onboarding

Use Case Name: Start Employee Onboarding	ID: 1	Priority: High		
Primary Actor: Employee				
Short Description: This describes how employees can get onboard with the job offered.				
Trigger: HR sends an offer letter to the selected candidate.				
Type: <input checked="" type="checkbox"/> External <input type="checkbox"/> Temporal				
Pre conditions: <ol style="list-style-type: none"> 1. Applications have been filtered based on the job role using software. 2. Applicant's information has been retained into the database. 				
Normal course: <ol style="list-style-type: none"> 1. The selected candidates will be asked to electronically sign the offer letter and complete the paperwork. 2. The system integrates third party screening services which include background check and drug testing. 3. The system notifies candidates about the login credentials to the employee portal. 4. An interactive portal is provided for the new hires to complete the required onboarding process 5. The employee will be required to acknowledge the company's policies digitally. 6. HR managers will be able to track the progress of the new hires via set disposition codes. 7. The system automatically notifies required departments, such as IT and payroll, of pending new hires and onboarding workflows. 	Information for Steps: <ul style="list-style-type: none"> → Offer Letter Acceptance ← Screening → Login Credentials → Interactive Portal ← Acknowledgement e-signature → Track Progress ← Workflow notification 			
Alternative course(s): <ol style="list-style-type: none"> 1. Employee is a new hire <ol style="list-style-type: none"> 1.1 System plays a welcome video 2. Employee has started the onboarding process <ol style="list-style-type: none"> 2.1 The system will display a checklist in the employee portal to keep the employee updated of the steps completed. 				
Post conditions: <ol style="list-style-type: none"> 1. Employee has completed the onboarding process 				
Summary				
Inputs	Source	Outputs	Destination	
Offer Letter Acceptance Login Credentials Acknowledgement via e-sign	Selected Candidate Portal Employee	Interactive Employee Screening Workflow	Portal Third party devices Departments	

Use Case 2: Set User Profile

Use Case Name: Set User Profile	ID: 2	Priority: Medium	
Primary Actor: Employee			
Short Description: This will enable user to enter their personal information and set goals			
Trigger: The employee has logged into the portal.			
Type: <input checked="" type="checkbox"/> External <input type="checkbox"/> Temporal			
Pre conditions: <ol style="list-style-type: none"> Employees must be authorized to access the company portal. 			
Normal course: <ol style="list-style-type: none"> The system will generate and/or record a unique identifier for each new employee. The system will allow employees to enter/edit their personal information. The system will allow employees to upload company required identity proofs: SSN, Passport. The system will notify employees to add emergency contact information. The system will enable employees to set and track his/her goals. The system will allow employees to enter their Bank details. The system will trigger other functionalities in HR module if employee makes changes in the personnel information. The system will allow employee manager/HR Representative to view employee details. 		Information for Steps: <ul style="list-style-type: none"> → Unique Identifier ← Employee information ← SSN, Passport → Emergency Contact ← Set/Track Goals ← Bank details → Changes in Information → Employee information 	
Alternative course(s): <ol style="list-style-type: none"> Employee is not authorized <ol style="list-style-type: none"> Employee ID or password is not valid System might ask the user to re-enter the details Employee forgets password <ol style="list-style-type: none"> Password registered link is sent to registered email Employee is asked to reset the password and login again 			
Post conditions: <ol style="list-style-type: none"> Employee information modified must be updated 			
Exceptions: <ol style="list-style-type: none"> Identification documents are not updated in pdf format <ol style="list-style-type: none"> Employee is asked to re-submit the documents in pdf format 			
Summary			
Inputs	Source	Outputs	Destination
Employee login	System	Unique Identifier	Employee
Employee information	Employee	Bank details	Employee data store
SSN, Passport	Employee	Identification documents	Employee data store
Emergency contacts	Employee	Emergency contact details	Employee data store
Bank details	Employee	Bank name/account number	Employee data store
Set Goals	System	Notify changes to be made	Employee

Use Case 3: Enroll in Benefits

Use Case Name: Enroll in benefits	ID: 3	Priority: Medium								
Primary Actor: Employee										
Short Description: This use case describes how employees are able to access their benefits										
Trigger: Employee wants view/enroll Benefits										
Type: <input checked="" type="checkbox"/> External <input type="checkbox"/> Temporal										
Pre conditions:										
<ol style="list-style-type: none"> 1. HR representatives have posted all the company associated benefits plan on the portal 2. HR representatives have set the maximum limit for enrolling in benefits plan 										
Normal course: <ul style="list-style-type: none"> 1. The system will allow employees to self-enroll in benefits plan. 2. The system will allow employees to view their past, current and upcoming benefits plan. 3. The system will make benefits deductions automatically from payroll, if triggered by the employee. 4. The system will keep track of all benefits plan and will send notifications when the plan is about to expire. 5. Employees can file disability right(s). 6. System will send disability approval/denial requests. 7. Employees can apply for parking permits/daily-commuter's benefits. 8. The system will provide recommendations for benefits plan. 		Information for Steps: <ul style="list-style-type: none"> ← Enroll in plan ← View Benefits plan → Benefits deductions → Plan expiry notifications ← File disability right(s) → Get approval/denial requests ← Commute/parking permit benefits → Get plan recommendations 								
Alternative course(s): <ol style="list-style-type: none"> 1. Employee is pre-registered in mandatory benefits plan according to company policies <ol style="list-style-type: none"> 1.1 Mandatory company plans are waived-off from company portal 										
Post conditions: <ol style="list-style-type: none"> 1. Benefits plans modified should be updated 										
Summary <table border="1"> <thead> <tr> <th>Inputs</th> <th>Source</th> <th>Outputs</th> <th>Destination</th> </tr> </thead> <tbody> <tr> <td>Enroll in benefits plan Deductions for benefits plan File disability rights Apply for parking permits Benefits plan expiry</td> <td>Employee Employee Employee Employee System</td> <td>Benefits plan Benefits plan Payment disability rights Request parking permit Request plan expiry notification</td> <td>Employee Benefits data store HR representative HR representative Employee</td> </tr> </tbody> </table>			Inputs	Source	Outputs	Destination	Enroll in benefits plan Deductions for benefits plan File disability rights Apply for parking permits Benefits plan expiry	Employee Employee Employee Employee System	Benefits plan Benefits plan Payment disability rights Request parking permit Request plan expiry notification	Employee Benefits data store HR representative HR representative Employee
Inputs	Source	Outputs	Destination							
Enroll in benefits plan Deductions for benefits plan File disability rights Apply for parking permits Benefits plan expiry	Employee Employee Employee Employee System	Benefits plan Benefits plan Payment disability rights Request parking permit Request plan expiry notification	Employee Benefits data store HR representative HR representative Employee							

Use Case 4: Manage Payroll

Use Case Name: Manage Payroll	ID: 4	Priority: High	
Primary Actor: Employee			
Short Description: This describes how the payroll is processed for the employees			
Trigger: Payroll cycle begins			
Type: <input checked="" type="checkbox"/> External <input type="checkbox"/> Temporal			
Pre conditions:			
<ol style="list-style-type: none"> 1. The employee should have worked at least until his/her first payroll schedule 2. The employee's time and attendance has to be up to date. 			
Normal course: <ol style="list-style-type: none"> 1. The system must notify the employee to fill the W-4 form. 2. The employees need to select the payroll schedule whether the salary is paid weekly, bi-weekly or monthly. 3. The system links the time and attendance tracking to the payroll so that hours worked can be seamlessly imported into the payroll system. 4. The employees can view their pay slip which includes gross amount and net amount. 5. The correct amount of taxes from each employee's paycheck is withheld. 6. The employees should file the employer federal tax returns quarterly. 7. The system will generate necessary reports with respect to tax filing which can be viewed and filled by the employees. 		Information for Steps: <ul style="list-style-type: none"> → W-4 form ← Payroll schedule → Time and attendance ← Gross and net amount → Tax deductions ← Income tax returns → Tax documents 	
Alternative course(s): <ol style="list-style-type: none"> 1. Employee has established account in the payroll system <ol style="list-style-type: none"> 1.1 System retrieves account information including payroll schedule 2. System verifies employees W-4 form for completeness. 			
Post conditions: <ol style="list-style-type: none"> 1. The employee has completed the W-4 form 2. The employee has received the salary 3. The employee has filled the federal tax returns 			
Exceptions: <ol style="list-style-type: none"> 1. Payslip is not generated 2. The system displays message "Timesheet and attendance not filled" when employee tried to view the payslip 3. The system asks the employee to fill in the time sheet and attendance 4. Employer federal tax reports not generated 5. The system displays message "Reports not available" 6. The system asks the employees to verify W-4 form and complete it to generate tax reports 			
Summary			
Inputs	Source	Outputs	Destination
W-4 form Payroll Schedule Income tax returns	Portal Employee Employee federal tax	Time and attendance system Gross and net amount Tax deductions paycheck Tax documents	Payroll Payslip Payslip Portal

Use Case 5: Take Training

Use Case Name: Take Training	ID: 5	Priority: Medium								
Primary Actor: Employee										
Short Description: This use case describes employee goes through training information and completes it										
Trigger: Employee views assigned training, reads the information, answers questions and marks them complete										
Type: <input checked="" type="checkbox"/> External <input type="checkbox"/> Temporal										
Pre conditions: <ol style="list-style-type: none"> 1. HR representatives have uploaded training material for the employees. 2. HR representatives have configured expiry of training or made it open for registration. 3. HR representatives have configured training to be available on a role basis. 4. HR representatives have entered questions that will be asked to employees on completion of training. 5. HR representatives have set training completion attempts. 6. Employees have set up their e-password (electronic password). 										
Normal course: <ol style="list-style-type: none"> 1. Every time a new training is assigned to the employee, the system notifies the respective employee. 2. If the training has an expiry date, then the system notifies the respective employees with the expiry date information. 3. The system allows employees to view all the assigned training to them. 4. The employees go through training information. 5. If the training has configured questions, then the employee is able to answer training questions. 6. If the training has configured training attempts, then the employee is able to view left training attempts. 7. If the employee fails at all the attempts, then the system notifies its manager. 8. If the employee fails to go through training prior to training expiry, then the system notifies its manager. 9. If the employee fails at all attempts or does not go through training prior to training expiry then the system allows the managers to set new training attempts and new expiry date. 10. If the training is open for registration, then the employee is able to register for such training(s). 11. On completion of training, the employees are able to enter their e-password. 12. Employees are able to mark the training as completed. 		Information for Steps: <ul style="list-style-type: none"> → Training assignment notice → Training expiry notice → Assigned trainings → Training material ← Training answer → Left training attempt(s) → Training fail notice → Expired training notice ← New training attempt and expiry ← Training registration ← ePassword → Training completion details 								
Post conditions: <ol style="list-style-type: none"> 1. Training completion details are stored in the database. 2. Completed training is no longer shown and notified to employees and their managers. 										
Summary <table border="1"> <thead> <tr> <th>Inputs</th> <th>Source</th> <th>Outputs</th> <th>Destination</th> </tr> </thead> <tbody> <tr> <td>Training answer New training attempt and expiry Training registration ePassword</td> <td>Employee Employee Manager Employee Employee</td> <td>Training assignment notice Training expiry notice Assigned trainings Training material Left training attempt(s) Training fail notice Expired training notice Training completion details</td> <td>Employee Employee Employee Employee Employee Employee Employee Employee Manager Training data store</td> </tr> </tbody> </table>			Inputs	Source	Outputs	Destination	Training answer New training attempt and expiry Training registration ePassword	Employee Employee Manager Employee Employee	Training assignment notice Training expiry notice Assigned trainings Training material Left training attempt(s) Training fail notice Expired training notice Training completion details	Employee Employee Employee Employee Employee Employee Employee Employee Manager Training data store
Inputs	Source	Outputs	Destination							
Training answer New training attempt and expiry Training registration ePassword	Employee Employee Manager Employee Employee	Training assignment notice Training expiry notice Assigned trainings Training material Left training attempt(s) Training fail notice Expired training notice Training completion details	Employee Employee Employee Employee Employee Employee Employee Employee Manager Training data store							

Use Case 6: Request Time off

Use Case Name: Request time off	ID: 6	Priority: High																																	
Primary Actor: Employee																																			
Short Description: This use case describes how employee requests time off																																			
Trigger: Employee requests for time off																																			
Type: <input checked="" type="checkbox"/> External <input type="checkbox"/> Temporal																																			
Pre conditions:																																			
1. HR representatives configure the number of PTOs, sick leaves and jury duty days on the basis of role, department, employee type (full time/contract) and number of year(s) in the company.																																			
Normal course: <ol style="list-style-type: none"> 1. The employee views the balance of each time off type (PTO, sick leave and jury duty). 2. The employee selects time off type. 3. The employee selects past, current and future dates from the past 1 month to future 1 year. 4. The employee selects time off for half or full day. 5. The employees enter comments for the time off request. 6. The employee submits time off requests. 7. On submission of time off request (based on time off type), the system notifies the employee's manager that they have a time off request from their employee. 8. On approval or rejection of the request, the system notifies employees with the status in the email. 9. The managers approve or rejects time off requests. 10. The manager enters comments before approving or rejecting the request. 		Information for Steps: → Time off balance ← Time off type ← Time off date(s) ← Half/full day ← Request comment → New time off request → Time off request notice → Time off status change notice ← Approve/Reject request ← Approval/reject comment																																	
Post conditions: <ol style="list-style-type: none"> 1. Time off request details is stored in the time off database. 2. Time off balance as per the type is updated in the time off database 																																			
Exceptions: <ol style="list-style-type: none"> 1. Enough balance is not available as per date selection (Occurs at step 6) <ol style="list-style-type: none"> 1.1 The system displays message that balance is insufficient for selected time off type 																																			
Summary <table border="1"> <thead> <tr> <th>Inputs</th> <th>Source</th> <th>Outputs</th> <th>Destination</th> </tr> </thead> <tbody> <tr> <td>Time off type</td> <td>Employee</td> <td>Time off balance</td> <td>Employee</td> </tr> <tr> <td>Time off date(s)</td> <td>Employee</td> <td>Time off request notice</td> <td>Employee manager</td> </tr> <tr> <td>Half/full day</td> <td>Employee</td> <td>Time off status change notice</td> <td>Employee</td> </tr> <tr> <td>Request comment</td> <td>Employee</td> <td></td> <td></td> </tr> <tr> <td>New time off request</td> <td>Employee</td> <td></td> <td></td> </tr> <tr> <td>Approve/Reject request</td> <td>Employee manager</td> <td></td> <td></td> </tr> <tr> <td>Approval/reject comment</td> <td>Employee manager</td> <td></td> <td></td> </tr> </tbody> </table>				Inputs	Source	Outputs	Destination	Time off type	Employee	Time off balance	Employee	Time off date(s)	Employee	Time off request notice	Employee manager	Half/full day	Employee	Time off status change notice	Employee	Request comment	Employee			New time off request	Employee			Approve/Reject request	Employee manager			Approval/reject comment	Employee manager		
Inputs	Source	Outputs	Destination																																
Time off type	Employee	Time off balance	Employee																																
Time off date(s)	Employee	Time off request notice	Employee manager																																
Half/full day	Employee	Time off status change notice	Employee																																
Request comment	Employee																																		
New time off request	Employee																																		
Approve/Reject request	Employee manager																																		
Approval/reject comment	Employee manager																																		

Use Case 7: Track Project Timeline

Use Case Name: Track Project Timeline	ID: 7	Priority: Medium																													
Primary Actor: Employee																															
Short Description: This use case describes an employee views the list of projects whose timeline they want to track and marks the needed project(s) as their favorite.																															
Trigger: Employee views list of projects and selects favorite project(s) from the list.																															
Type: <input checked="" type="checkbox"/> External <input type="checkbox"/> Temporal																															
Pre conditions: <ol style="list-style-type: none"> 1. The system integrates with third party applications. 																															
Normal course: <ol style="list-style-type: none"> 1. Employees view a list of all the ongoing projects. 2. Employees view the project's start and end date. 3. Employees search for projects in the system. 4. For the entered keyword, the system shows a list of projects. 5. Employees mark projects as favorites. 6. Employees are able to switch to favorites tab to view favorite projects only. 7. Employees are able to set monthly notification alerts. 8. Employees are able to request to view the timeline chart. 9. The system shows project timeline graphically. 10. Employees are able to download project details in pdf format. 		Information for Steps: <ul style="list-style-type: none"> → Ongoing project list → Start & end date ← Keyword → Search result ← Favorite project → Project details ← Notification ← Timeline chart request → Project timeline → Project details 																													
Post conditions: <ol style="list-style-type: none"> 1. Employees are sent monthly email notifications for the subscribed project(s). 																															
Summary <table border="1"> <thead> <tr> <th>Inputs</th> <th>Source</th> <th>Outputs</th> <th>Destination</th> </tr> </thead> <tbody> <tr> <td>Keyword</td> <td>Employee</td> <td>Ongoing project list</td> <td>Employee</td> </tr> <tr> <td>Favorite project</td> <td>Employee</td> <td>Start & end date</td> <td>Employee</td> </tr> <tr> <td>Notification</td> <td>Employee</td> <td>Search result</td> <td>Employee</td> </tr> <tr> <td>Timeline chart request</td> <td>Employee</td> <td>Project details</td> <td>Employee</td> </tr> <tr> <td></td> <td></td> <td>Project timeline</td> <td>Employee</td> </tr> <tr> <td></td> <td></td> <td>Project details</td> <td>Employee</td> </tr> </tbody> </table>				Inputs	Source	Outputs	Destination	Keyword	Employee	Ongoing project list	Employee	Favorite project	Employee	Start & end date	Employee	Notification	Employee	Search result	Employee	Timeline chart request	Employee	Project details	Employee			Project timeline	Employee			Project details	Employee
Inputs	Source	Outputs	Destination																												
Keyword	Employee	Ongoing project list	Employee																												
Favorite project	Employee	Start & end date	Employee																												
Notification	Employee	Search result	Employee																												
Timeline chart request	Employee	Project details	Employee																												
		Project timeline	Employee																												
		Project details	Employee																												

Data Flow Diagrams

Context Diagram

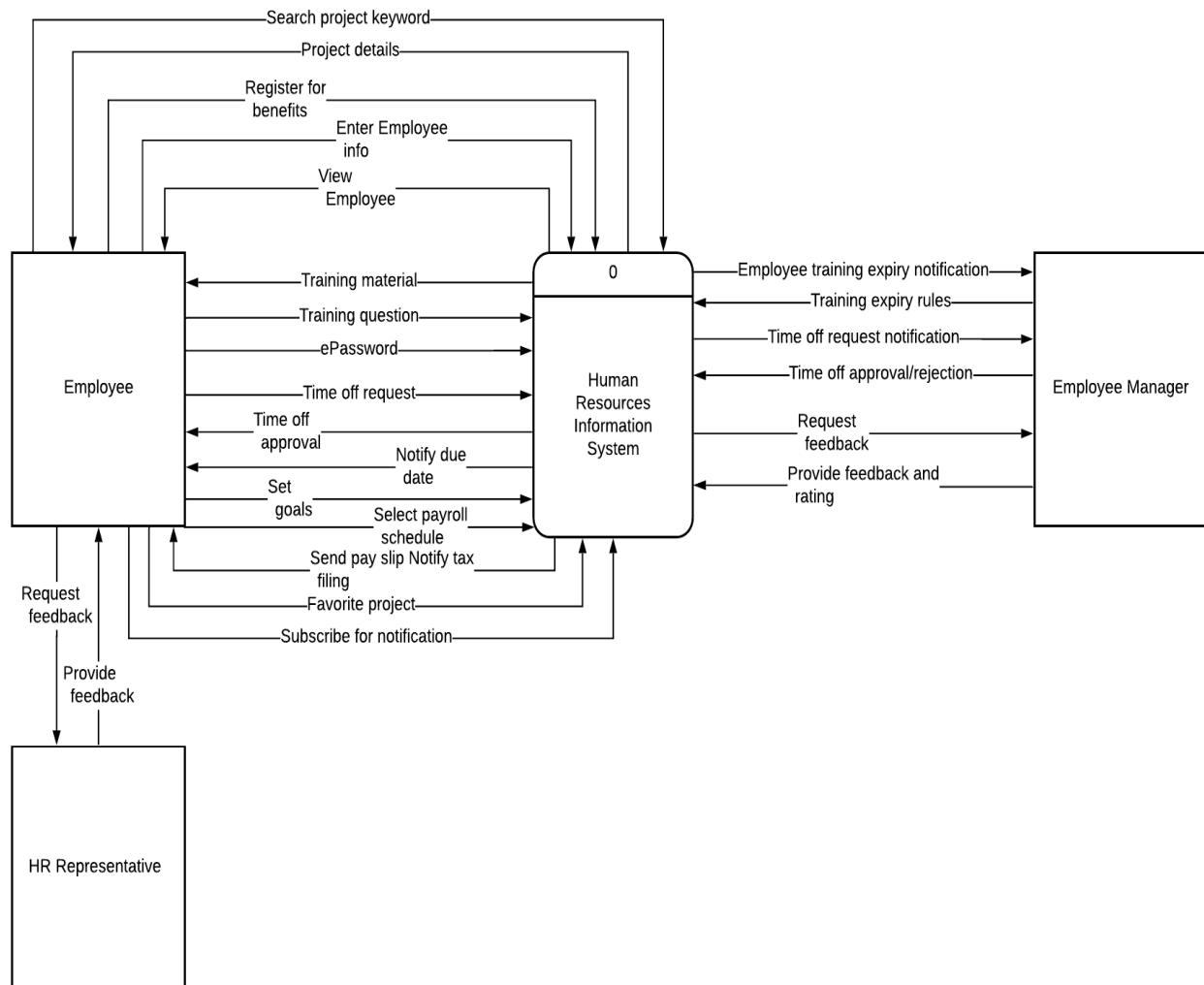


Figure 1.1
EasyWorks HRIS Context Diagram

Level 0 DFD

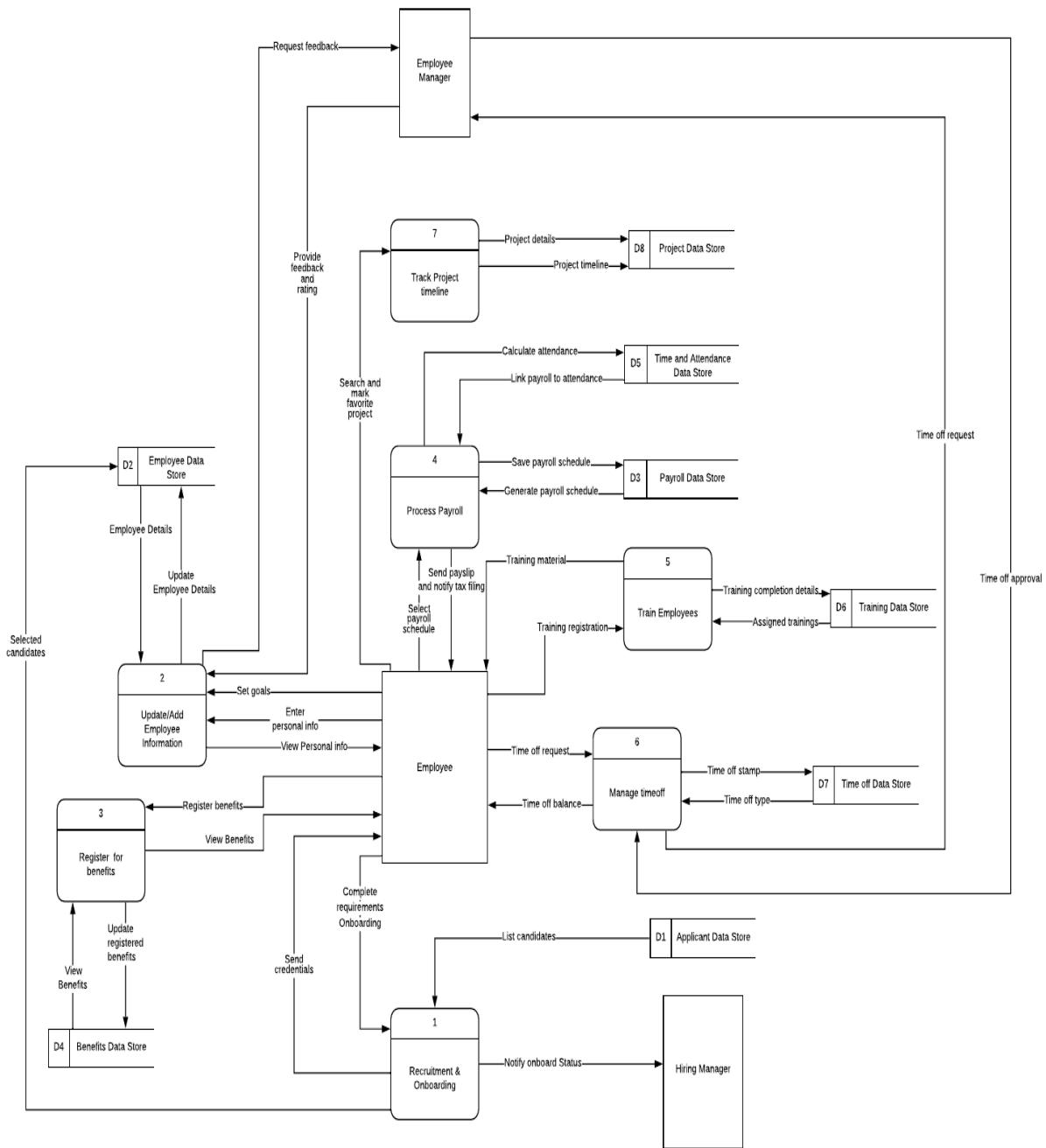


Figure 1.2
EasyWorks HRIS Level 0

Level 1 DFD

Start Employee onboarding

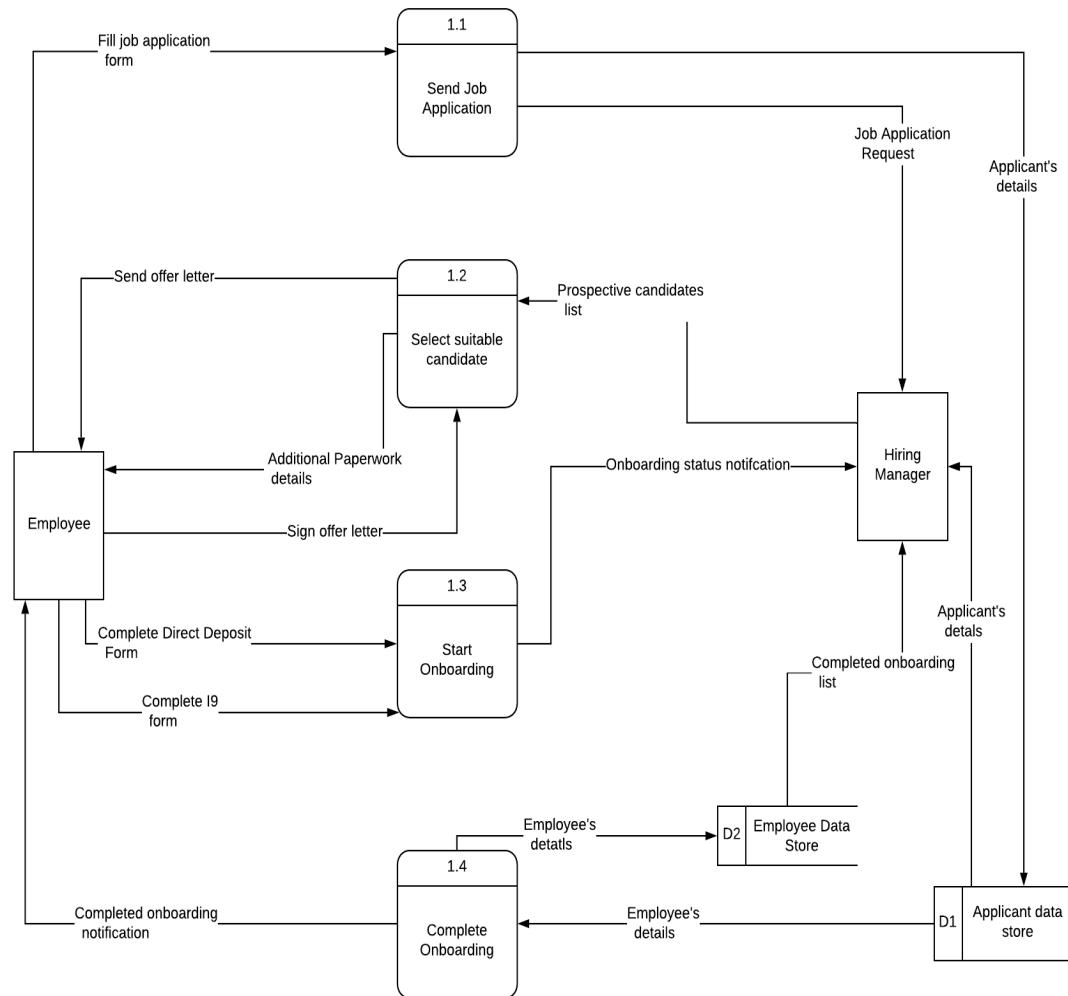


Figure 1.3
EasyWorks HRIS Employee onboarding Level 1 DFD

Set User Profile

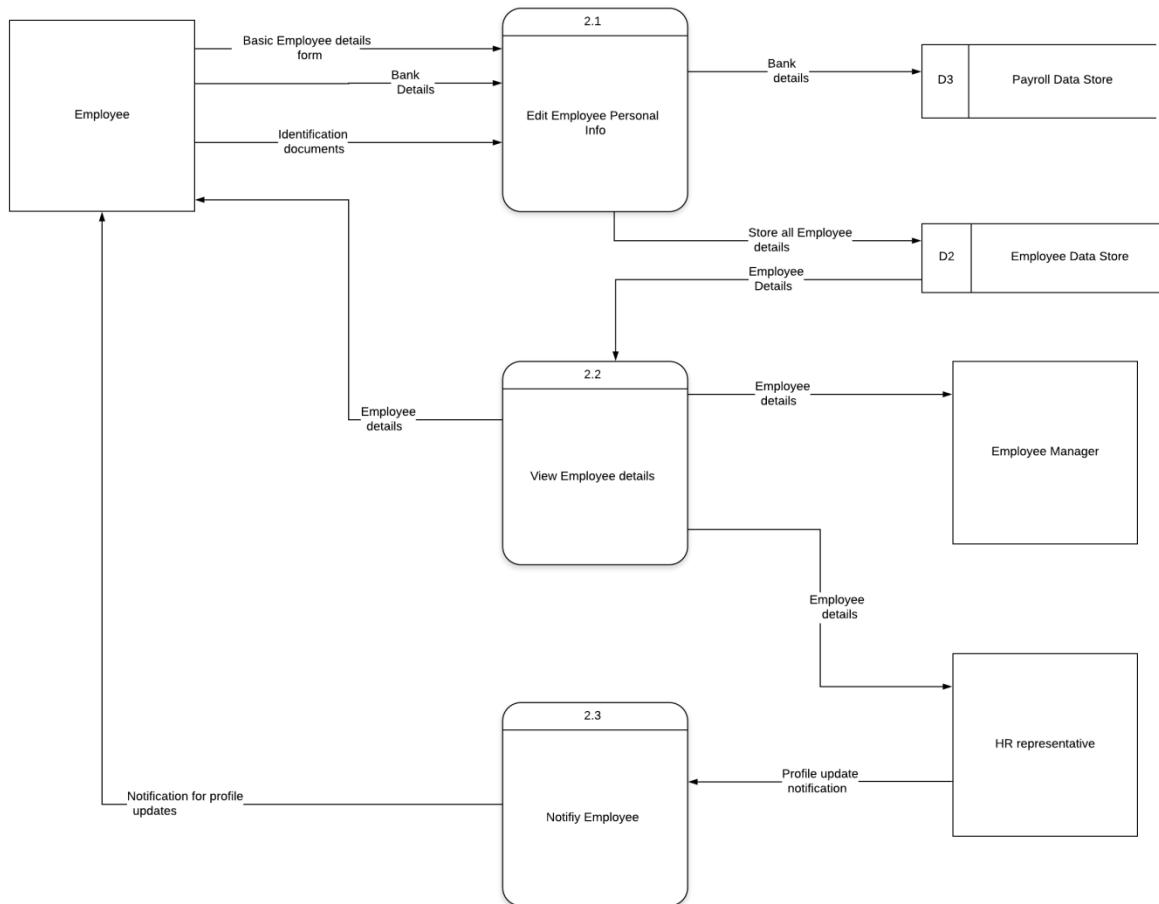


Figure 1.4
EasyWorks HRIS Set User Profile Level 1 DFD

Enroll in Benefits

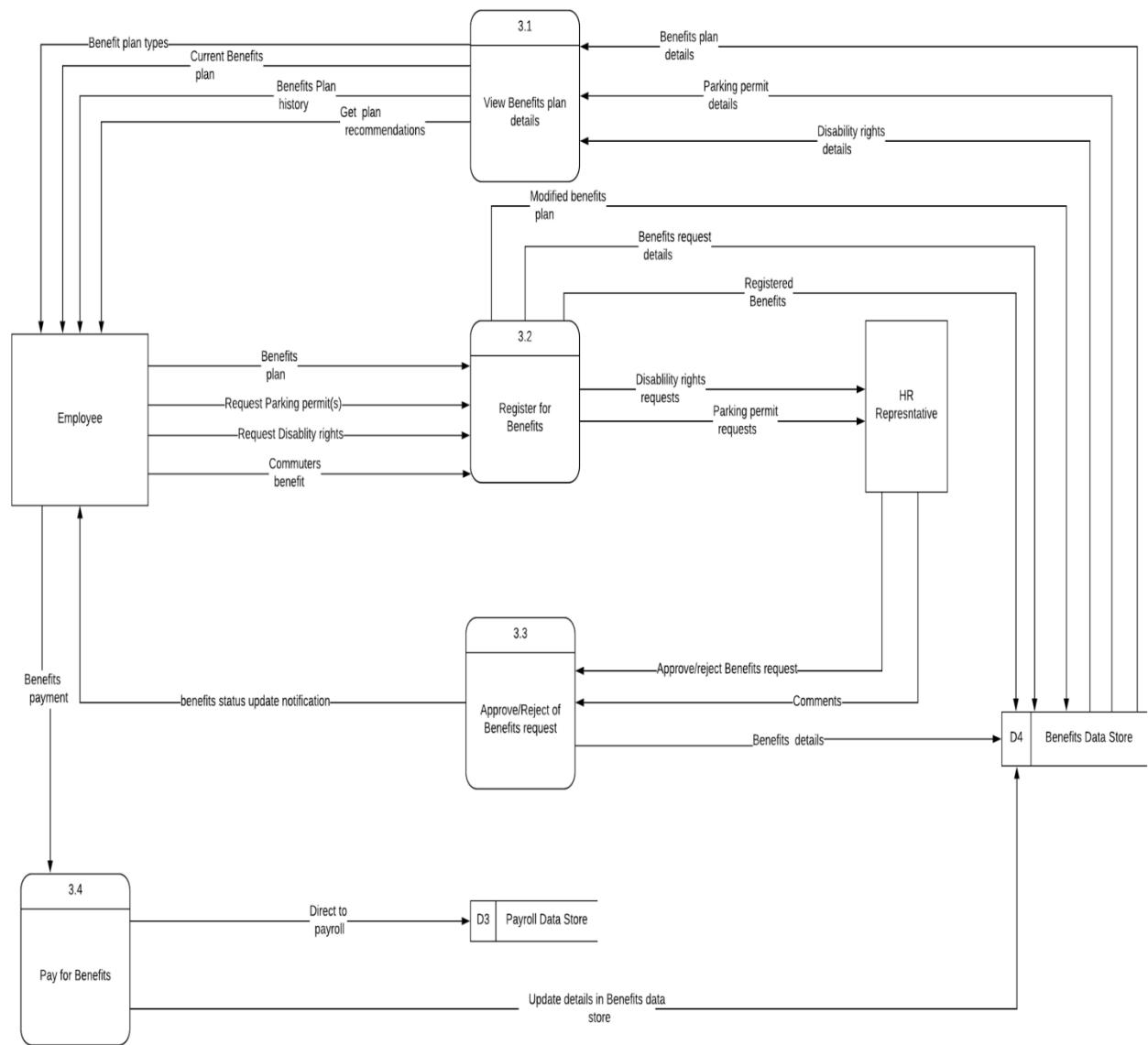


Figure 1.5
EasyWorks HRIS Enroll in Benefits Level 1 DFD

Manage Payroll

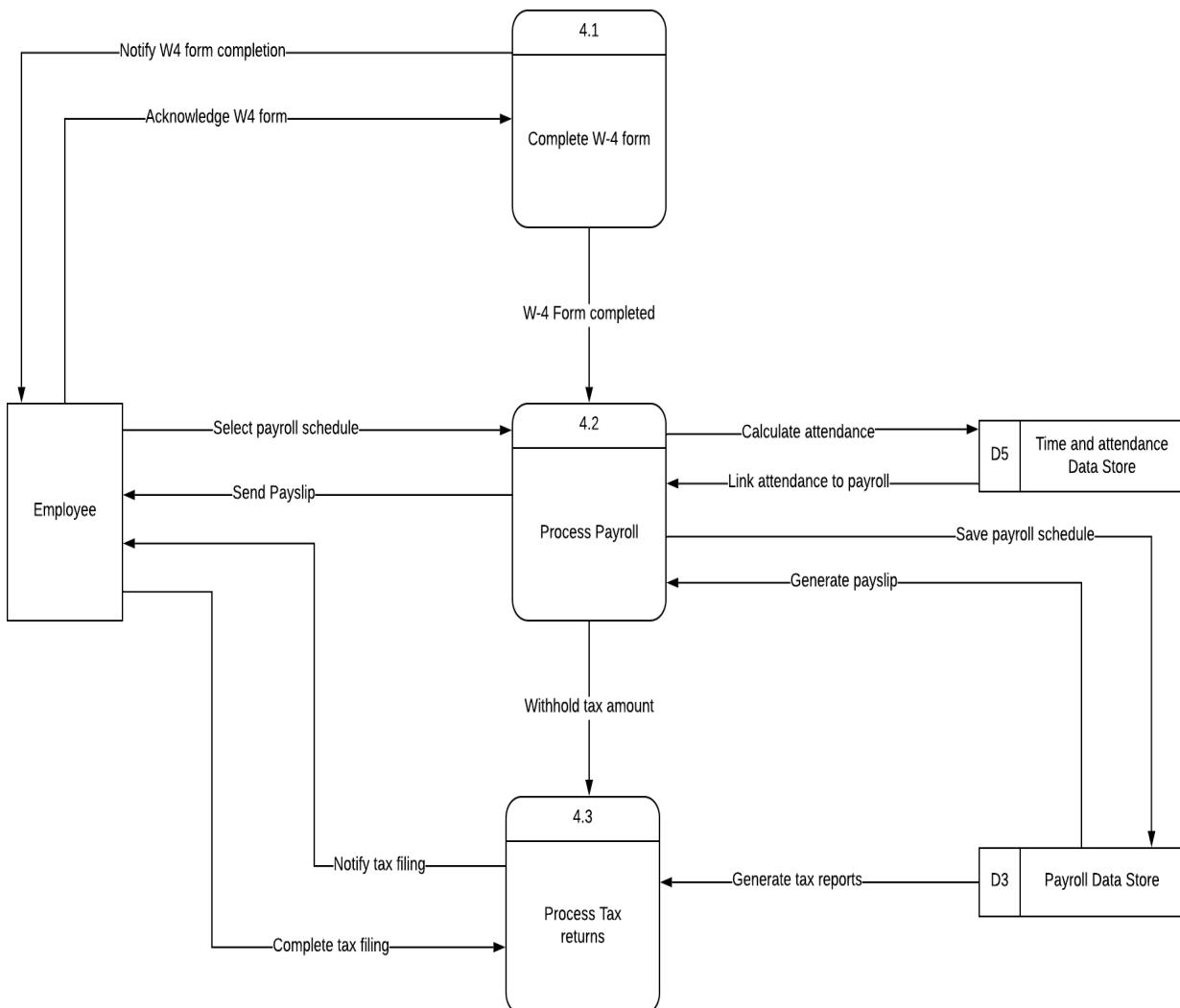


Figure 1.6
EasyWorks HRIS Manage Payroll Level 1 DFD

Take Training

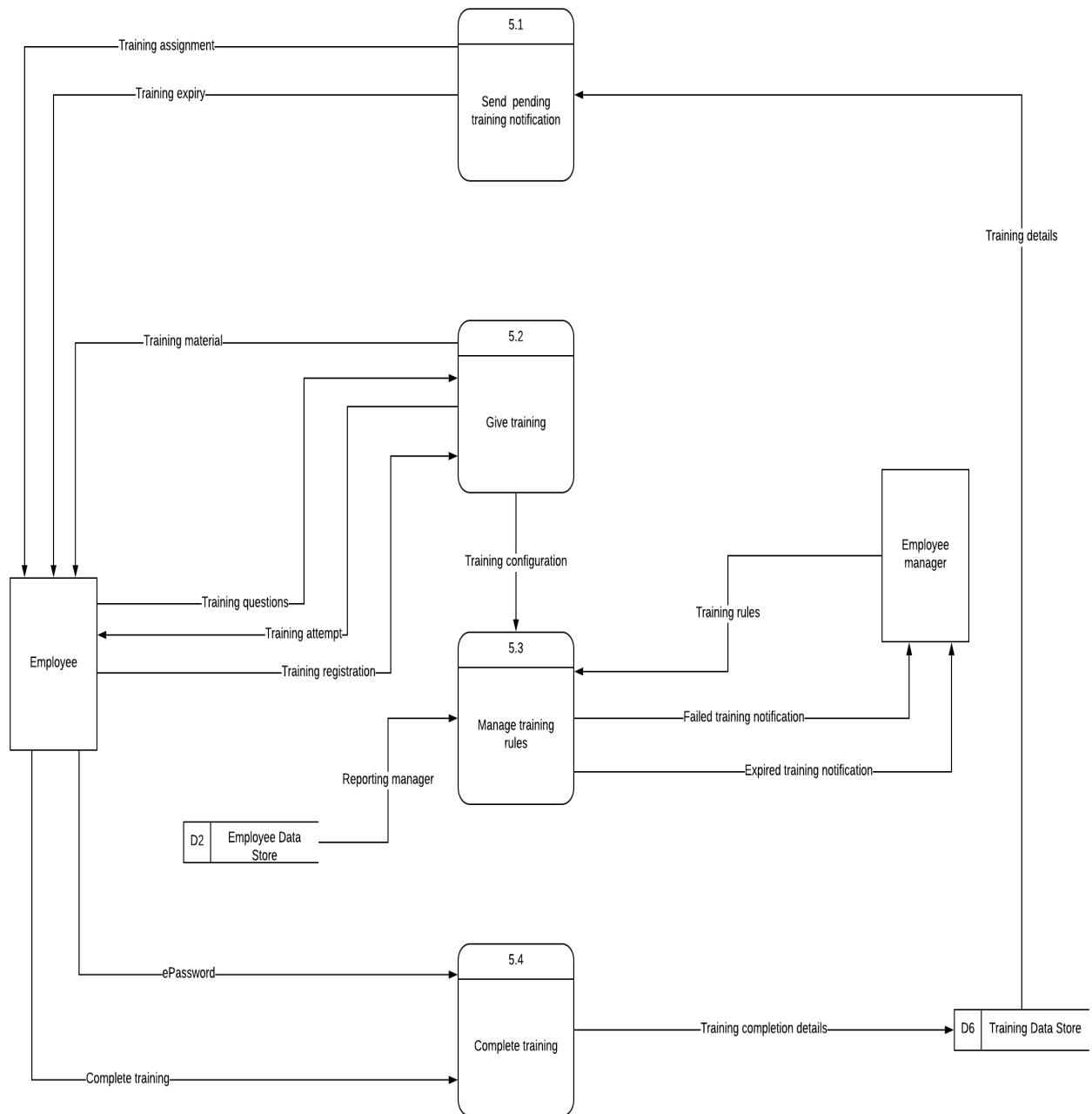


Figure 1.7
EasyWorks HRIS Take Training Level 1 DFD

Request Time-off

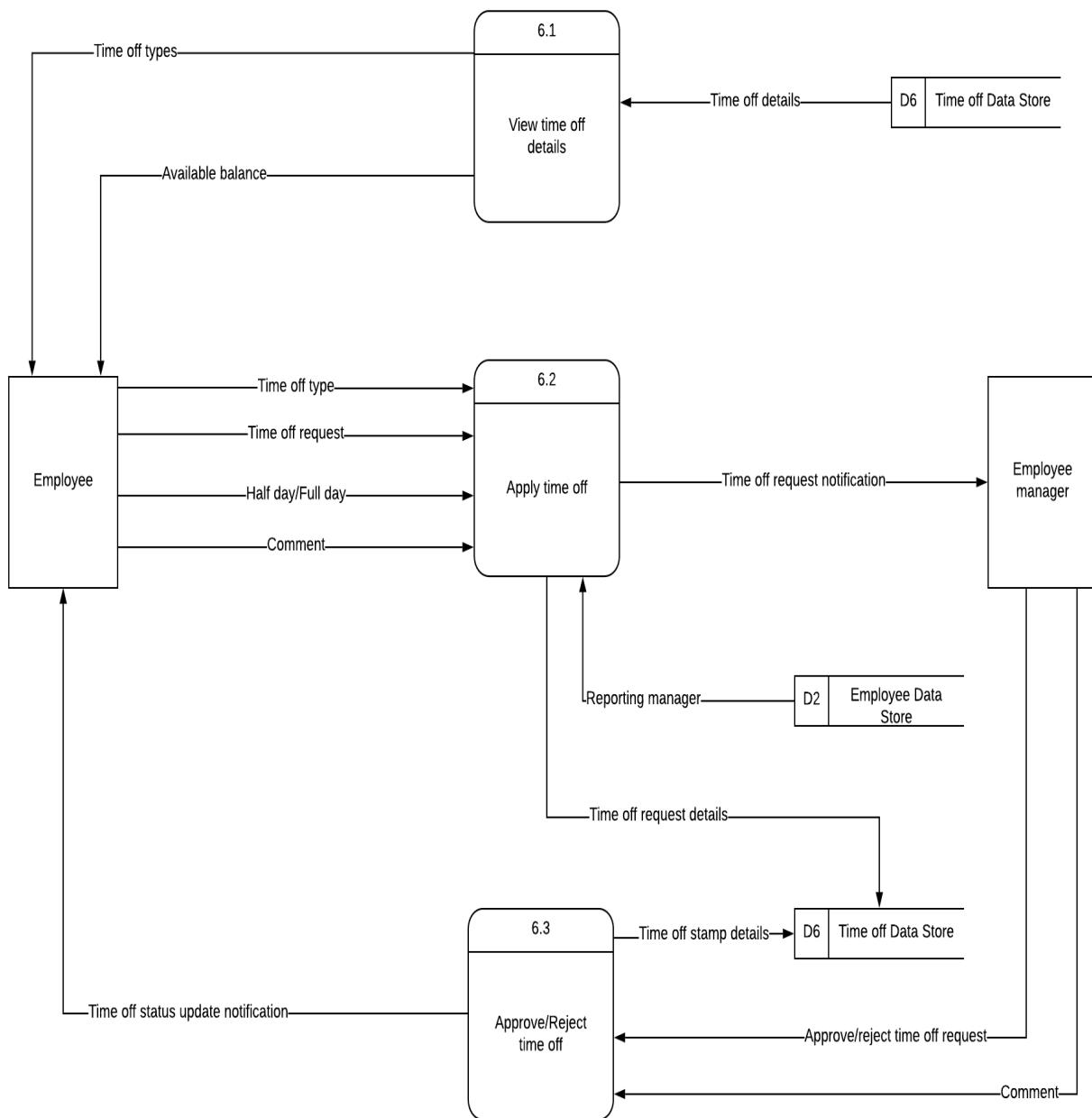


Figure 1.8
EasyWorks HRIS Request Time off Level 1 DFD

Track Project Timeline

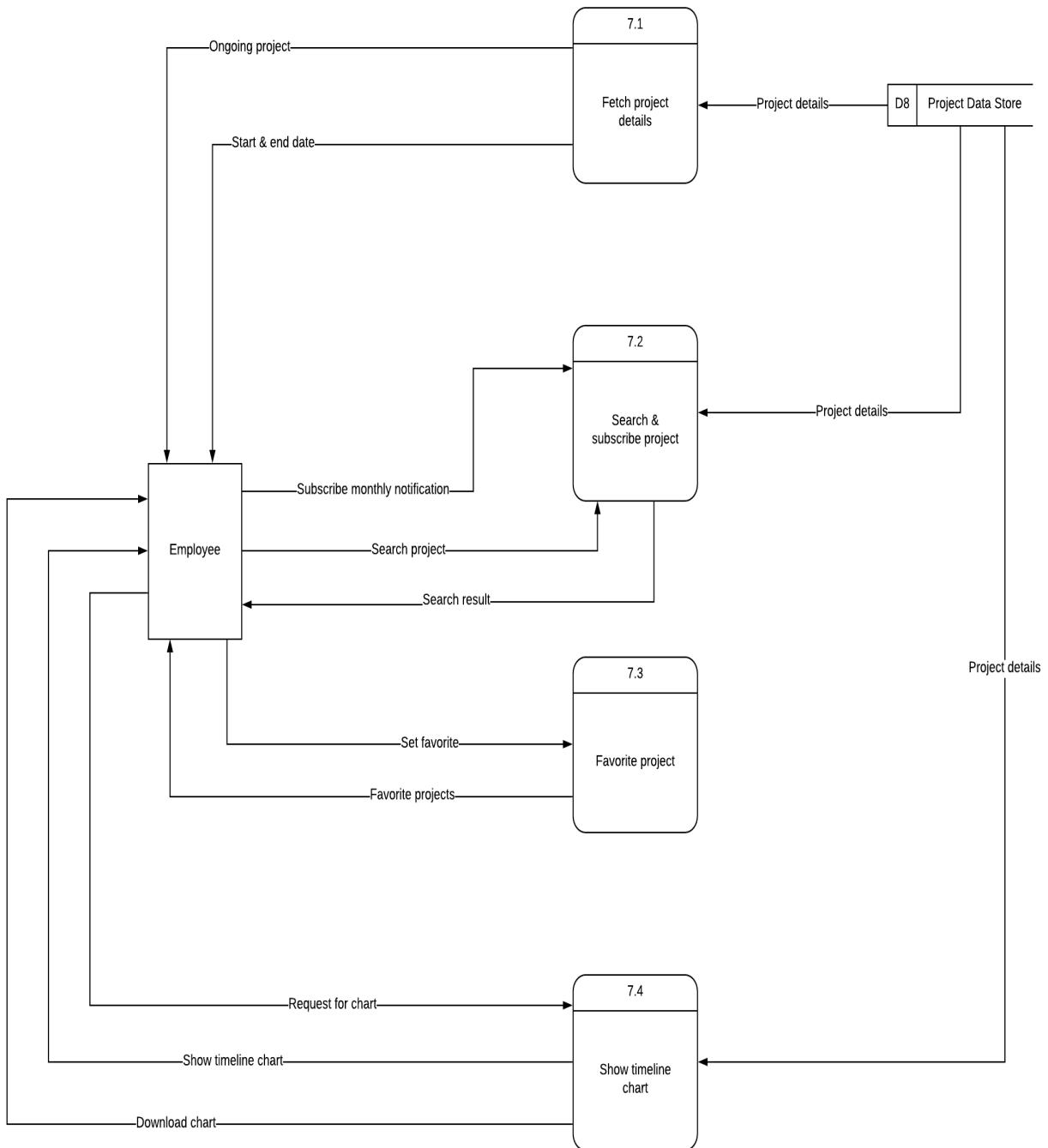


Figure 1.9
EasyWorks HRIS Track Project Timeline Level 1 DFD

Structure Chart

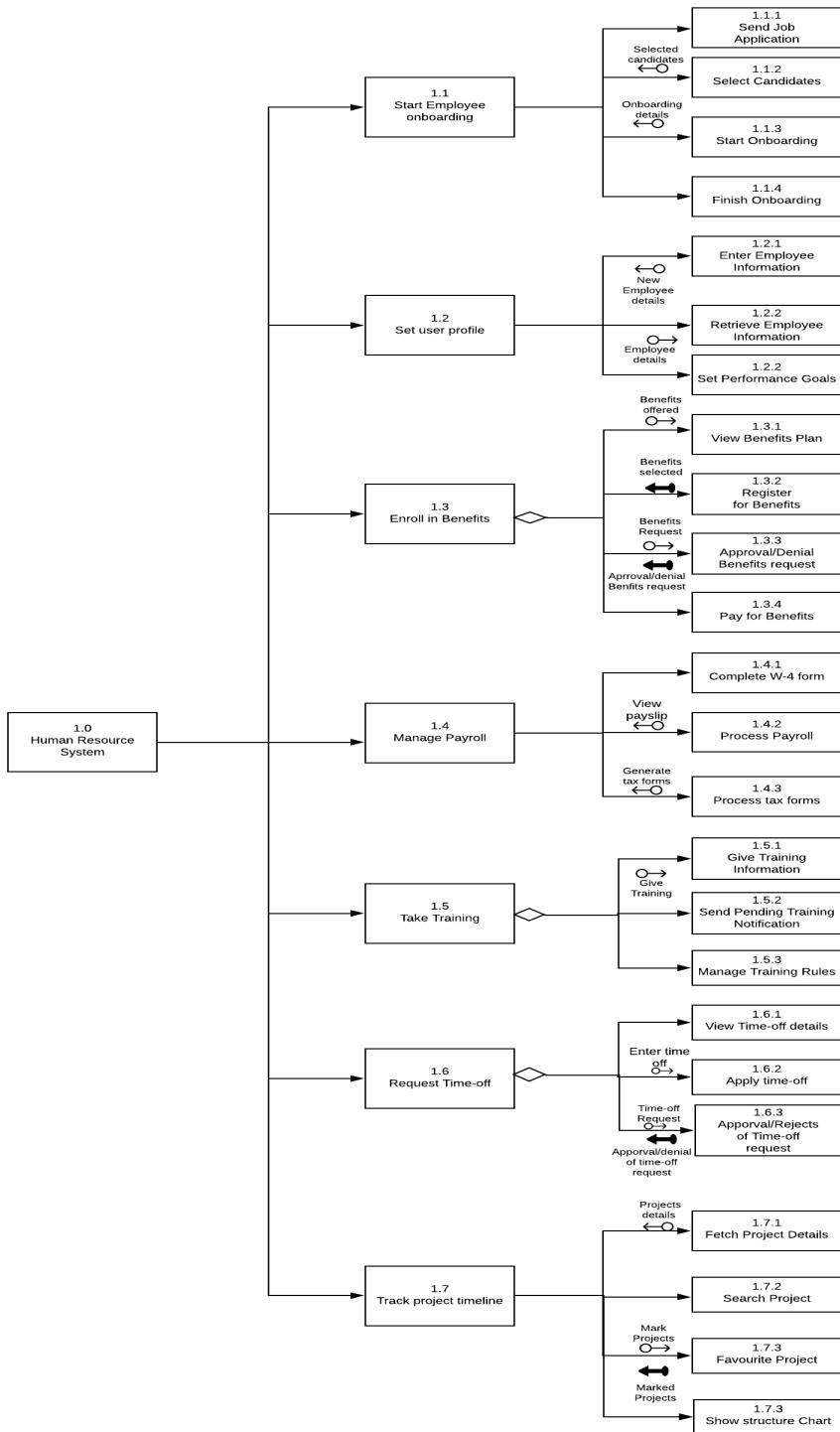


Figure 2.1
Structure Chart

Data Dictionary

DATA	NAME	ATTRIBUTE	DESCRIPTION	DATA TYPE	DOMAIN	DEFAULT VALUES
D1	Applicant Data store	First Name	Applicant First Name	VarChar	A-Z, a-z, Special Characters	Required
		Last Name	Applicant Last Name	VarChar	A-Z, a-z, Special Characters	Required
		Email	Applicant Email	VarChar	A-Z, a-z, 0-9, Special Characters	Required
		Street	Applicant Address- Street	VarChar	A-Z,a-z, 0-9, Special Characters	Null
		Zip	Applicant Address- Zip	Integer	0-9	Null
		City	Applicant Address- City	VarChar	A-Z,a-z	Null
		Country	Applicant Address- Country	VarChar	A-Z,a-z	Required
		Phone Number	Applicant Phone Number	VarChar	0-9,'+', '-'	Required
		Email	Applicant Email	VarChar	A-Z, a-z, 0-9, Special Characters	Required
		Application Date	Date of application	Date	0-9, '/',mm/dd/yy	Required
D2	Employee Data store	Employee ID	An 8-digit Unique identification number assigned to each employee	Integer	0-9	Auto Increment
		First Name	Employee First Name	VarChar	A-Z,a-z, Special Characters	Required
		Last Name	Employee Last Name	VarChar	A-Z,a-z,Special Characters	Required

		Email	Employee email	VarChar	A-Z, a-z, 0-9, Special Characters	Required
		Street	Employee Address- Street	VarChar	A-Z, a-z, 0-9, Special Characters	Required
		Zip	Employee Address- Zip	Integer	0-9	Required
		City	Employee Address- City	VarChar	A-Z,a-z	Required
		Country	Employee Address- Country	VarChar	A-Z,a-z	Required
		Phone Number	Employee phone Number	VarChar	0-9,'+', '-'	Required
		Date of Birth	Employee date of birth	Date	0-9,'/', mm/dd/yy	Required
		Emergency Contact Name	Emergency Contact First Name	VarChar	A-Z,a-z, , Special Characters	Required
		Emergency Contact Last Name	Emergency Contact Last Name	VarChar	A-Z,a-z, , Special Characters	Required
		Emergency Contact Email	Emergency Contact email	VarChar	A-Z, a-z, 0-9, Special Characters	Null
		Emergency Contact Phone Number	Emergency Contact phone number	VarChar	0-9,'+', '-'	Required
D3	Benefits Data store	Benefits Code	An unique identification for Benefits plan	Integer	0-9	Required
		Benefits Plans Offered	Details of Benefits plans offered by the company	VarChar	A-Z, a-z, 0-9, Special Characters	Required
		Benefits Plan History	Details of history of all Benefits plan offered by the company	VarChar	A-Z, a-z, 0-9, Special Characters	Required
		Third-Party Benefits Plan	Details of Benefits plans offered by Third-party associated to the company	VarChar	A-Z, a-z, 0-9, Special Characters	Null
		Employee Benefits Plan	Details of benefits plans currently enrolled by the employee	VarChar	A-Z, a-z, 0-9, Special Characters	Required

		Employee Benefits Plan History Employee Future Benefits Plan Benefits Plan Process Requests	Details of employee benefits plans history Details of future enrollment of employee benefits plans Details of requests/approvals made by employees & employee manager for benefits	VarChar VarChar VarChar	A-Z, a-z, 0-9, Special Characters A-Z, a-z, 0-9, Special Characters A-Z, a-z, 0-9, Special Characters	Null Null Null
D4	Training Data store	Training Code	An unique identification for Training	Integer	0-9	Required
		Trainings Offered	Details of Trainings offered by the company	VarChar	A-Z, a-z, 0-9, Special Characters	Required
		Trainings History	Details of history of all Trainings offered by the company	VarChar	A-Z, a-z, 0-9, Special Characters	Null
		Employee Training	Details of Trainings currently enrolled by the employee	VarChar	A-Z, a-z, 0-9, Special Characters	Required
		Training completion date-time	Date-time information when training was completed by employee	Date/Time	0-9, '/', mm/dd/yy hh:mm:ss, ':'	Null
		Training expiry date	Date on which training will expire	Date	0-9, '/', mm/dd/yy	Null
D5	Time off Data store	Employee ID	An 8-digit Unique identification number assigned to each employee	Integer	0-9	Required
		Time-off start date	Details of time-off start-date	Date	0-9, '/', mm/dd/yy	Required
		Time-off end date	Details of time-off end date	Date	0-9, '/', mm/dd/yy	Required
		Full day/Half	Time off for full day/half day	Boolean	0 -> Full day 1-> Half day	Required
		Time-off details	Details of time-off category/ external comments	VarChar	A-Z, a-z, 0-9, Special Characters	Null

D6	Time and attendance Data Store	Employee ID	An 8-digit Unique identification number assigned to each employee	Integer	0-9	Required
		Clock-in time	Contains time when the employee clock in everyday	DateTime	0-9, ':', hh:mm:ss	Required
		Clock-out time	Contains time when the employee clock out everyday	DateTime	0-9, ':', hh:mm:ss	Required
D7	Payroll Data Store	Employee ID	An 8-digit Unique identification number assigned to each employee	Integer	0 - 9	Required
		Payroll schedule	Details regarding the payroll, whether its bi-weekly or monthly	Boolean	0 -> bi-weekly 1 -> monthly	Required
		Payslip generation date	Contains date when the payslip is generated	Date	0-9, '/', mm/dd/yy	Required
		Tax filing notification date	Contains due date for tax filing	Date	0-9, '/', mm/dd/yy	Required
D8	Project Data Store	Project ID	Unique project identification number	Varchar	A-Z, a-z, 0-9, Special Characters	Required
		Project start date	Start date of project	Date	0-9, '/', mm/dd/yy	Null
		Project end date	End date of project	Date	0-9, '/', mm/dd/yy	Null
		Employee ID	Employee ID of the employee who wants to set favorite project	Integer	0-9	Null
		Notification	For employees who want to set notification on monthly basis	Boolean	0-> No notification 1-> Notify on monthly basis	Null

Gantt Chart

Human Resource Information System (January 2020 - March 2020)

Santa Clara University

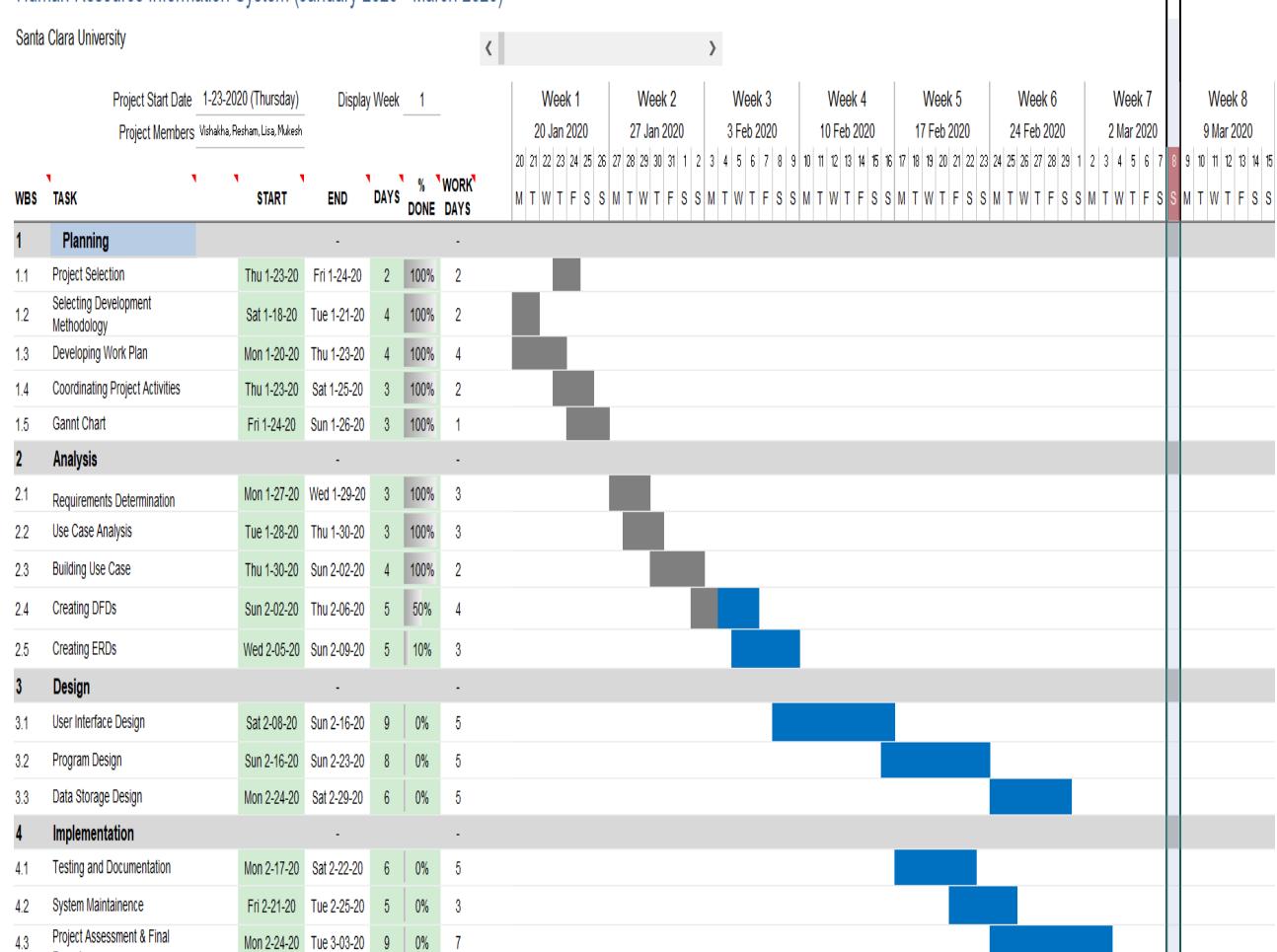


Figure 3.1
Gantt Chart

Output Results



Figure 4.1
Employee portal login page



Figure 4.2
Home Page

Onboarding:

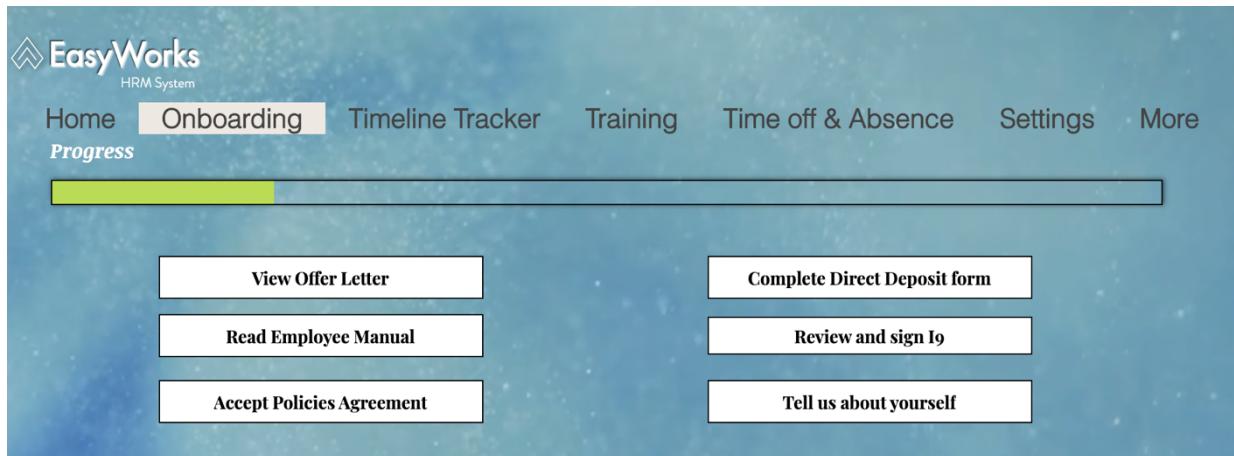


Figure 4.3.1
Module: Onboarding

The screenshot shows a sub-menu under the 'Onboarding' module. The title 'We would like to know more about you.' is displayed at the top. Below it are three input fields: an email field labeled 'Email *', a text area labeled 'Describe yourself in few words.', and another text area labeled 'What do you expect out of this job?'. The background is light blue.

Figure 4.3.2
Module: Onboarding (Sub-menu)

Training:

The screenshot shows the 'Training' section of the EasyWorks HRM System. At the top, there's a navigation bar with the EasyWorks logo and links for Home, Onboarding, Timeline Tracker, Training, Time off & Absence, Settings, and More. Below the navigation, the title 'Products and Services' is displayed. A text block encourages employees to learn about the company's products and services and to take a quiz after reading/watching the resources. At the bottom, there are two buttons: 'View Files' and 'Watch a video', separated by the word 'or'.

Figure 4.4.1

Module: Training

The screenshot shows the 'Start Quiz' page. It features a large image of a person giving a thumbs-up. Overlaid on the image is the text 'All set? Let's find out how much you know about our company!'. At the bottom, there's a prominent orange button with the text 'Start Quiz'.

Figure 4.4.2

Module: Training (Quiz)

Timeline Tracker:

Project Name	Start Date	Est. End Date	Actions
1 Automation of Data Protection Products	09/06/2019	04/21/2020	
2 Unified Sign On	01/20/2020	07/03/2020	
3 Cloud Migration	03/20/2020	09/15/2020	
4 Customer Web Portal	09/30/2019	05/03/2020	

Figure 4.5.1
Module: Timeline Tracker

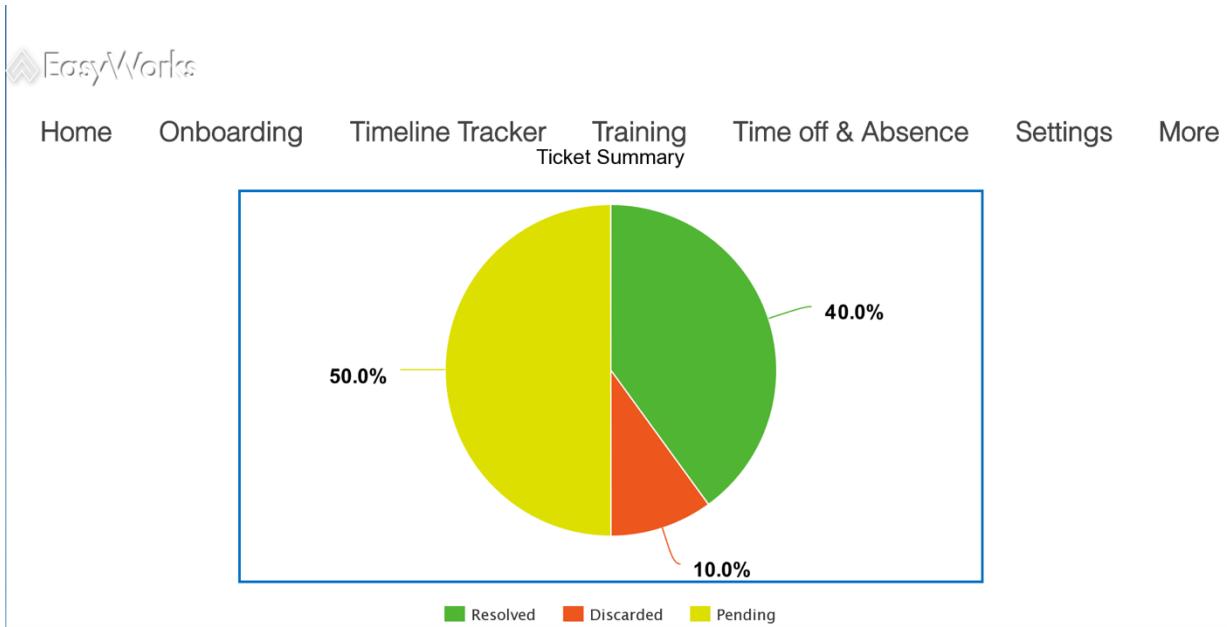


Figure 4.5.2
Module: Timeline Tracker (View Project Details)

Future Scope

Human Resources Information Systems are constantly evolving with the technological innovations which aim at automating HR functions to reduce human error.

Similarly, we plan on enhancing our system by allowing:

1. EasyWorks to integrate with third party applications to provide a rich UI experience.
2. EasyWorks to integrate with top job boards and social media sites to post jobs. It will assist the Applicant Tracking process through ATS for a more streamlined hiring process.
3. Include a chatbot on the employee portal to enable user interactions in case of any system related queries.