



University  
of Glasgow

**B.Sc (Hons) in Computing Science**

# **CSC2005 Human Computer Interaction**

## **Studio Assignment 1**

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## 1. Identification of Activities

In order to fulfil the rising demands and deliver additional values to the business, it is apparent that Human Resource (HR) are required to invest in the enhancement of its operational processes, moving away from traditional administrative work. In most HR processes being implemented currently, the procedures to be performed are usually complicated and repetitive creating unnecessary workloads on both the employees and management staffs.

HR processes encompassed several aspects and of which our team had identified three domains of **Leave**, **Payslip** and **Claim** as the cardinal functionalities that a HR application should have. These identified domains are common to every company, and it also present as apparent issues being encountered frequently by the employees. These domains were being testified with data collected by the team through different need-finding methods and further elaborations would be stated in subsequent sections.

Description of Selected Activities	
<b>Leave</b>	
Activity:	Applying for leave
Description:	Leaves are essential to employees and employers alike, giving them well-deserved time off outside of work for leisure purposes. The process of applying for leave should be quick and smooth with no issues in order to get approval as soon as possible
<b>Payslip</b>	
Activity:	Managing of payslips
Description:	Allows users to select and view their payslips from any point in time since working for the company, payslips are essential as proof of the salary a person draws from the company as well as other potential uses outside of the company
<b>Claim</b>	
Activity:	Applying for claims
Description:	Claims are means of qualifying for workers' compensation benefits if it occurred on the job or within the scope of employment such as healthcare and transport. The process of applying for claims should be easy to understand and follow as there are many different claims types with their own respective supporting documents, this prevents confusion when applying for a claim which might result in the claim not being processed or rejected.

## 2. Need-Finding Methods

The process of need-finding was conducted ethically with three main principles of proper informed consent, safety and privacy being adhered to strictly. The team had assessed and decided that the most appropriate methods for data

collection within the short timeframe would be: **interview, direct observation and survey**. Below summaries the results and analysed conclusions. Further details and recorded transcripts of each need-finding method are indicated in **Annex A**.

a) Interview

Interview was being selected as it provides the most efficient and accurate method of directing the flow of information through the staging of questions. A total of four participants who came from different hierarchical positions and industries took part in the structured interview.

Common to all interviews, it was being stated explicitly by all participants that having the ability to view colleagues' leave are important feature that they would like to have in a HR application. Besides that, for the application of claims, while there were not much issues being encountered, it was noted that different claim types required different procedures resulting in confusing and non-systematic instruction. Whereas for payslip, one of a participants mentioned the suggestion of two additional features to enhance user experience which are: being able to download the payslip and able to send individuals payslip to personal email upon subscribing to the service.

Our team concluded that being able to view colleague leaves is one of the important aspects that an HR application should encompass. Having access to a calendar that details the leave of colleagues, would promote better forward planning and better management of overlapping leave within the department. Furthermore, additional features which enhances user experience as mentioned above should be considered for implementation.

b) Direct Observation

Direct Observation was being selected as it allows us to study the processes implemented using our senses. It allows us to document behaviours and emotional aspects of a situation. A total of two direct observations were being conducted. Participants were being observed in a controlled setting during a 6 hrs duration. A list of activities was listed and our team noted down the processes undertaken to achieve each activity hypothetically by the participants.

A few similar observations were being noticed between the two conducts. (1) The process of applying for claims require the submission of hardcopy receipt or invoice for verification and the process after which are not visible. (2) Activities such as taking attendance and requesting approval for leave relies heavily on communication tools such as WhatsApp for the facilitation and

tracking of information. (3) In order to perform a single activity such as approval of leave, information required for decision making were being stored in different multiple platforms.

With the observation pointers, our team drew further insight that the application process for leave and claims should be made visible to applicants. In addition, the application should also be centralised with the necessary information required for quick decision making for every hierarchical level.

#### c) Survey

Survey was being selected to reach out to a wider group of participants with the aim to gather much more perspectives and to strengthen the analysis being made. A total of 35 responses were collected, majority of them being employees coming from a good mix of different employment statuses.

Majority of the responses indicated that their company's HR processes had either been partially or fully digitalised, with a small minority still using decentralised channels to manage their HR processes. Common to both group of participants, issues were faced when applying for leave and claims. With majority of them stating having tedious processes and the lack of visibility as their main concern. Furthermore, based on popularity votes of the features to have in a HR application, the top three are: leave, payslip and claims.

The responses gathered further testified the inferences formulated from the previous need-finding methods. Therefore, our team would be dwelling on these three domains with the aim to increase the process efficiency and the ease of usage through simple user interface.

### 3. Task Analysis

The process of hierarchical task analysis (HTA) allows the team to describe the actions to be performed in a structural manner. It involves the decomposition of activities into minor sub-tasks detailing the chronological sequence of each task to be completed. The tasks being analysed reveals inefficiency in the current implemented HR processes and the following state the reasons and conclusion. Refer to the diagrams under **Annex B** for the diagrammatic HTA.

a) **Applying for Leave.** Application of leave follows a set of repetitive tasks. In a typical company, on-going operation of the branches/departments are paramount, and usually a certain threshold would be maintained to achieve it. As such, employees who intends to apply for leave go through a two-step process. First, requires the cross-check and deconflicting of overlapping leaves

with different colleagues in the same department and this could relatively be a time-consuming and mundane task when the department size is big. Assuming that due diligence had been performed, and submission of leave was done, next on the management level, further checks might also be performed before making the decision to approve or reject the leave. With the lack of process visibility, constant checking with direct superior would be required, making the process frustrating.

b) **Managing of Payslip.** The process of processing and managing of payslip had been automated and are relatively simple with easy steps. However, the lacks in functionality had been noted, only allowing users to view their payslip.

c) **Applying for Claim.** In comparison to applying for leaves, application for claim follows a similar two-step process. First employees who intends to apply for claims require figuring out of the claim protocols. As different claims may require different supporting documents, such information could only be advised by the HR department. Next, on the HR management level, further checks such as employee benefits or other company's policy would be performed before making the decision to approve the claims. Similarly, the process lacks visibility further aggravate frustration towards the process.

#### 4. Identified User Needs

Based on the conducted need-finding methods, our team had arrived with the following five user requirements for the HR application.

a) **Intuitive and User-Friendly Web-based Interface.** Based on survey responses, there were multiple votes on the interface of the HR application currently in use being counterintuitive. Much time were required to be invested in order to be familiarise with the usage of the application. As such, having a clear and structured interface with intuitive prompts will foster greater users' responsibilities in use of the application, thus significantly improve user experience. Majority of the participants had also casted their preference of having the convenience to access it through the form of web based. This would remove the need for users to download a dedicated application through their respective application store which would take up further storage on their phone.

b) **Centralised View with Necessary Information Required for Application of Leave.** Visibility of required information is the most common issue being identified which impedes decision making and achieving the

completion of tasks. It had been mentioned that being able to view colleagues leave and work schedule would enable employees to have better forward planning of their leaves and it would also facilitate all hierarchical level with readily available details for effective decision making.

c) **Visibility of Application Status.** Another apparent issue being identified is the lack of visibility of claims and leaves statuses. This leads to constant checking with respective stakeholders for status update. This could be better implemented with constant updates availably shown on the application.

d) **Ease of Application for Different Claims.** Issues and discrepancy were encountered during the process of claims as mentioned in the survey responses. Different claims encompass different set of instructions and different specific submission documents which are only known after performing checks and advised by HR department.

e) **Downloading Mechanism for Payslip.** Most HR applications only allows the viewing of payslip online without the ability to download it or view it elsewhere. Providing the option for users to be able to download the payslip onto their device or even sending a copy to their email for safekeeping would provide further customisation for users of the application.

## 5. Implications and Conclusions

Through the need-finding and task analysis, our team concluded that even though there are existing digitalised solution in aid of the trying HR processes, the solutions implemented were not comprehensive and holistic enough. Often, the solutions being implemented were targeted to achieve certain goals/result with the process of achieving it being taken out of the equation. This would lead to the surfacing of issues such as duplication of efforts and poor user experience. Furthermore, rather of having a solution that ease the process, it instead makes users' life even more sophisticated. Hence, it is important that during the stage of need-finding and task analysis, apart from finding out the root issues, extra emphasis should be placed into uncovering the behaviour and emotional aspects of the outcome and information to be collected. This would allow us to better understand the system requirements and facilitates the designing of an encompassing solution for the users.

## Annex A

### a) Interview

	<b>Pre-interview brief to participants</b>
1	We will be conducting an interview/observation to get feedback on your current HR experience.
2	This feedback will be used to create an HR application.
3	We will be video/voice recording your experience with your HR activities, such as submitting claims, payslips, applying for leaves. Should additional information be recorded we will ask for your permission.
4	Please know that your names, company names, any identifiable information will not be recorded.
5	Please know that you can stop at any time. Can we proceed with the meeting?

	Management Staff
Platform Used:	Website
Features Provided:	Pay slip, Attendance, Claim, Calendar
Pros:	<u>Attendance:</u>
Cons:	Allow the check-in and out of staff  <u>Calendar:</u> <ul style="list-style-type: none"><li>• Should be able to see if colleagues are checked-in or out</li><li>• Shared calendar to have an overview schedule of the department</li></ul>
Improvements:	<u>Leave &amp; Claim:</u> Differentiation of leave and claims for different employee status (i.e. Parttime, Fulltime).  <u>Payslips:</u> <ul style="list-style-type: none"><li>• Allows the downloading into pdf with security access</li><li>• Allow the option to send payslip to personal email</li></ul> <u>Additional:</u> <ul style="list-style-type: none"><li>• Dashboard should give the entire solution</li><li>• Software should be easy and intuitive to use</li></ul>
Summary of Interview with Management Staff.	



	Employee 1	Employee 2	Employee 3
Platform Used:	Website	Mobile and Website Application	Website Application
Features Provided:	Payslip, Leave	Leave, Medical Status, Claims	Leave, Claims, Payslips, Training Course, Self-Development plan
Pros:	Easy to apply for leave	Intuitive User Interface	Intuitive User Interface Favourite features: Leave and Claims
Cons:	<ul style="list-style-type: none"> <li>. Bad UI interface</li> <li>. Need time to adjust</li> <li>. Hard to navigate around</li> </ul>	<ul style="list-style-type: none"> <li>Tedious to apply for claims</li> <li>. Require much inputs</li> <li>. Long waiting time for approval (1-3 months)</li> </ul>	<ul style="list-style-type: none"> <li>. Calendar</li> <li>. Only shows date</li> </ul>
Improvements:	<u>Calendar</u> <ul style="list-style-type: none"> <li>. Want to be able to see when colleagues apply for leave so that he knows when not to disturb them</li> <li>. Can use it to plan for leave</li> </ul>	<u>Calendar</u> <ul style="list-style-type: none"> <li>. Aware of when colleagues take leave so can use it to plan in advance</li> </ul> <u>Announcement</u> <ul style="list-style-type: none"> <li>. Receive announcement on the application instead of email/ WhatsApp group</li> <li>. Might miss out important message at other platforms</li> </ul>	<u>Calendar</u> <ul style="list-style-type: none"> <li>. To include colleagues' leave</li> </ul>

Summary of Interview with Employees.

<u>Transcript (Management Staff)</u>	
<b>Interviewer:</b>	<b>What are the key functions that you are looking for?</b>
Interviewee:	Take a photo of the claim & submit, Check-in & check out, Leave
<b>Interviewer:</b>	<b>How do they usually check in?</b>
Interviewee:	Use an Access card / Thumb reader. Extract data from the machine. Some use Cloud, interact with DB. Supports export with excel. The system will know first check-in & the last check out
<b>Interviewer:</b>	<b>Is the app supposed to help virtual working?</b>
Interviewee:	<p>Communication between colleagues, have to ask HR if colleagues are on leave. How does HR know if everyone is working from home? So, there's a panel where HR can see check-in and check-out. HR centrally knows.</p> <p>If there's a calendar. Pick a colleague's name and see his calendar. Know if he checked in or check out.</p>

<b>Interviewer:</b>	<b>What's the difference between an admin, manager, and normal employee?</b>
Interviewee:	For normal employees to apply leave and claims, check out colleague names. For manager approve leave and claims, upload team claims and team leave Administrator: access based there's still processing of the claims via HR.
<b>Interviewer:</b>	<b>Is there a difference between Part time &amp; Full time Claims?</b>
Interviewee:	The claims are different for example transport benefit limited, number of leave are different for each employee, funds are allocated to them differently
<b>Interviewer:</b>	<b>Is there a limit people taking leave?</b>
Interviewee:	Hard to limit the amount of people who can leave today. The upper management will decide and approve the leave accordingly. How are approval done?
<b>Interviewer:</b>	<b>How are approval done?</b>
Interviewee:	Approval will take two approvals. Manager & HR.
<b>Interviewer:</b>	<b>Are there any frustrations?</b>
Interviewee:	Interface sites should be intuitive enough to easily access information required. The dashboard should give the entire solution. Different lifestyle and way of using things. How you play with Facebook and Instagram. Has to be that kind of easiness.
<b>Interviewer:</b>	<b>Is there anything you are looking for in a calendar?</b>
Interviewee:	Calendar, there is a shared calendar. If I'm working with 10 people, I should be able to see 10 people's tasks.
<b>Interviewer:</b>	<b>Is the team working in close proximity?</b>
Interviewee:	Pandemic situation, work from home. People working from overseas. There could be a communication gap, because not going to the office. Personal touch is still missing. Internal organization social. Share some stuff faster and easier. Should not look like a business app, more like a social media app.
<b>Interviewer:</b>	<b>What is the current form of distributing pay-slip?</b>
Interviewee:	Payroll, auto generated approval of payroll. automatically pay slip is generated.
<b>Interviewer:</b>	<b>What other features are you looking for in pay-slip?</b>
Interviewee:	They can download the pay slip as a pdf. Payroll additional pin code is definitely required. downloaded files should be password protected. Be able to subscribe to send payslip to email as well.
<b>Interviewer:</b>	<b>Are there any colour schemes you are looking for?</b>
Interviewee:	1. Dark themes and light themes are fine for personalization. not as important. organization doesn't care that much. but personalization adds a lot of value. so two themes is fine.

<b><u>Transcript (Employee 1)</u></b>	
<b>Interviewer:</b>	<b>Hi, thank you for willing to be interviewed, your information will be kept confidential. Do you have an HR application that you use in your company for applying for leave, claims, etc?</b>
Interviewee:	Yes
<b>Interviewer:</b>	<b>What do you think of the overall usage of your application?</b>
Interviewee:	Good
<b>Interviewer:</b>	<b>Are there any issues you faced when using the application? Like anything you have problems with applying for using the app</b>
Interviewee:	Yes, the user interface is bad.
<b>Interviewer:</b>	<b>Can give me more details on the user interface? Why is it bad?</b>
Interviewee:	Very hard to navigate because I've never used the software before. Had to ask many questions to my HR person
<b>Interviewer:</b>	<b>Ah ok. What about now? Are you used to the application after using it for a while?</b>
Interviewee:	Yes I'm used to it le LOL
<b>Interviewer:</b>	<b>Haha ok ok, so other than UI problems at the start now okay already ah, no further issues?</b>
Interviewee:	Nope
<b>Interviewer:</b>	<b>Alright moving on. Does your HR application show you all the information you need? Like payslip, leave, calendar, etc</b>
Interviewee:	Yes
<b>Interviewer:</b>	<b>Is there anything that you want to see on the app but isn't there?</b>
Interviewee:	A calendar view of the dates I have applied for leave on
<b>Interviewer:</b>	<b>Ah ok ok. What do you like most about your HR app?</b>
Interviewee:	Easy to apply for leave. just need to select the type of leave, number of days and wait for manager approval
<b>Interviewer:</b>	<b>That's actually good haha. Is your HR app web-based or on phone?</b>
Interviewee:	Web-based
<b>Interviewer:</b>	<b>Phone no app?</b>
Interviewee:	Nope. I don't know got a web version or not but I always applied via the web
<b>Interviewer:</b>	<b>Does your company use online attendance to track who is in that day that kind of stuff?</b>
Interviewee:	No
<b>Interviewer:</b>	<b>Do you want it to be implemented?</b>
Interviewee:	Nope
<b>Interviewer:</b>	<b>Why not?</b>
Interviewee:	I don't find it a need
<b>Interviewer:</b>	<b>Ok ok. Just now you said you want a calendar view of your leave</b>

	<b>applied, got any other features you want to be inside your HR app? Can be something new, an add on?</b>
Interviewee:	I want to be able to see the days my colleagues apply for leave
<b>Interviewer:</b>	<b>How will that assist you regarding HR matters?</b>
Interviewee:	I just want to know when my colleagues taking leave LOL so that I don't disturb them
<b>Interviewer:</b>	<b>Oh you don't have a thing where too many people can't take leave on a single day ah? Maybe can use that to plan your leave haha</b>
Interviewee:	Never heard of it
<b>Interviewer:</b>	<b>All right</b>
Interviewee:	I always apply my leave in advance 1-2mths
<b>Interviewer:</b>	<b>Ok, does your HR app require you to log in? If so, using what method? username and password?</b>
Interviewee:	Yes, email password and company code
<b>Interviewer:</b>	<b>When you use the HR app, roughly how many actions/clicks do you need to complete a task? On average ah</b>
Interviewee:	Less than 10
<b>Interviewer:</b>	<b>How long does it take to complete a task on average?</b>
Interviewee:	Within 5 mins
<b>Interviewer:</b>	<b>So overall how would you rate your HR app? maybe out of 10?</b>
Interviewee:	9/10
<b>Interviewer:</b>	<b>Okay, that's it, I got no more questions. thank you for your time</b>
Interviewee:	Thanks
<b>Interviewer:</b>	<b>Oh wait one more question, if can have a phone HR app, you want? Do you prefer a phone/web application?</b>
Interviewee:	Sure, why not. Both are fine
<b>Interviewer:</b>	<b>Ok ok that is all</b>
Interviewee:	Okay no problem

<b><u>Transcript (Employee 2)</u></b>	
<b>Interviewer:</b>	<b>Hello, thank you for participating in this interview. Just to let you know, the information gathered in this interview will be kept strictly confidential. Do you mind if I record today's interview?</b>
Interviewee:	Nope, sorry
<b>Interviewer:</b>	<b>Its okay, I shall start with the first question, may I know your age as of 2021?</b>
Interviewee:	I'm 22 years old this year (male)
<b>Interviewer:</b>	<b>What is your current working status in your company?</b>
Interviewee:	Full time employee
<b>Interviewer:</b>	<b>Is your company human resource processes being digitalised?</b>

Interviewee:	Yes, it is in the midst of moving towards digitalised
<b>Interviewer:</b>	<b>Great, what platform does your company use?</b>
Interviewee:	Mobile Application
<b>Interviewer:</b>	<b>Can you elaborate more about the mobile application? Like what features are there?</b>
Interviewee:	Oh, it allows us to apply for leave, check medical status and also apply for claims
<b>Interviewer:</b>	<b>Are you happy with the current features or do you feel like there is room for improvement?</b>
Interviewee:	I am currently happy with the mobile application as it is easy and simple to use, quite straightforward. However, for the claims, it is hard as there are too many protocols and rules to follow.
<b>Interviewer:</b>	<b>Can you briefly go through the protocols or rules for the claim?</b>
Interviewee:	I would have to discuss with my manager first and research on the cheapest option, to prove that I am purchasing the cheapest one. Have to receive confirmation before I can proceed to purchase it. After that I will submit something like a report back to my manager and wait for them to process it and get back to me. It takes like 1-3 months to process too. And worst of all we are supposed to hold on to that original receipt for financial people to audit.
<b>Interviewer:</b>	<b>Oh damn, that does sound troublesome. Hahahahah. Okay, moving on, what log in authentication do you prefer when logging into the application, eg like password, pin, fingerprint, facial recognition?</b>
Interviewee:	Password
<b>Interviewer:</b>	<b>Hmmm why though, won't pin, fingerprint or facial recognition be way much faster?</b>
Interviewee:	Some phones do not have facial recognition or fingerprints. Furthermore, the application can be access through phone and website, so I think password would be better
<b>Interviewer:</b>	<b>Ahh, I see your point. Next question, from attendance, leave, payslips and claims, which of these features do you think is the most important?</b>
Interviewee:	Leave
<b>Interviewer:</b>	<b>Why?</b>
Interviewee:	Leave are important as a lot of people look forward to applying leave to get some rest or for urgent reason
<b>Interviewer:</b>	<b>Do you face any issue when applying for leave?</b>
Interviewee:	I have to keep checking to see if my leave are approved and it is honestly quite troublesome and I also not sure when my colleagues are applying for leave
<b>Interviewer:</b>	<b>Can you briefly tell me the process of applying for leave at your company?</b>
Interviewee:	I would have to discuss with my manager first before applying it

<b>Interviewer:</b>	<b>Why do you want to know when your colleagues are taking leave?</b>
Interviewee:	This is to prevent everyone from taking at the same time and also allow us to know whether is there anyone that can cover for us when we take leave
<b>Interviewer:</b>	<b>How long does it take for your leave to be approved?</b>
Interviewee:	It really depends on how free the manager is. There isn't like a confirm date or time the manager will get back to us that's why I have to constantly check the status to see if it is approved or not
<b>Interviewer:</b>	<b>Other than all the features I mention, is there anything you would like to see on the application?</b>
Interviewee:	Announcement
<b>Interviewer:</b>	<b>Why?</b>
Interviewee:	It is better to integrate announcements into the app instead of sending it separately via email or SMS
<b>Interviewer:</b>	<b>What method of taking attendance do you prefer, like selfie yourself at work, QR code, face recognition etc?</b>
Interviewee:	QR Code
<b>Interviewer:</b>	<b>Why, though? Isn't it easy for employee to cheat the system by sharing the QR code to their friends</b>
Interviewee:	QR code is much faster and convenient. QR Code can always be regenerated after every use so this can prevent any cheating involved
<b>Interviewer:</b>	<b>That's the end of the interview. Thank you so much!</b>

<u><b>Transcript (Employee 3)</b></u>	
<b>Interviewer:</b>	<b>Hello, thank you for allowing me to interview you. The information gathered will be kept confidential. First, may I ask you to briefly describe your job?</b>
Interviewee:	I'm an analyst in SPF.
<b>Interviewer:</b>	<b>Does your company use any HR portal/application when applying for leave, claims or other matters?</b>
Interviewee:	Yes
<b>Interviewer:</b>	<b>Is your company's HR portal/application web based or mobile based?</b>
Interviewee:	It is a web-based application.
<b>Interviewer:</b>	<b>Could you please briefly describe your HR portal/application?</b>
Interviewee:	Hmm I would say that it has a good interface and it is quite easy to use.
<b>Interviewer:</b>	<b>Overall, what are your thoughts about it?</b>
Interviewee:	I would rate it 4/5
<b>Interviewer:</b>	<b>Why did you give it a 4/5?</b>
Interviewee:	Because it is easy to apply leave/claims. The UI is simple however it is bad in terms of design so it was not very intuitive.
<b>Interviewer:</b>	<b>Could you elaborate more on that?</b>
Interviewee:	The UI is minimal and not cluttered up. However, there's little distinction

	between primary and secondary buttons so it is a bit difficult to navigate.
<b>Interviewer:</b>	<b>Okay, thank you for elaborating. What features does your company's HR portal/application have?</b>
Interviewee:	The application includes leave, claims, self-development plan, pay slips and training courses.
<b>Interviewer:</b>	<b>Out of those features, which are you satisfied with the most?</b>
Interviewee:	I am most satisfied with leave and claims features.
<b>Interviewer:</b>	<b>What feature do you use the most?</b>
Interviewee:	I used the leave feature the most.
<b>Interviewer:</b>	<b>Why?</b>
Interviewee:	This is because it's very convenient, the process is very easy.
<b>Interviewer:</b>	<b>Oh I see. Why is the process of taking leave easy? Could you briefly describe it?</b>
Interviewee:	I will directly go into the leave section on the main page, then there will be a drop-down option and I will select the type of leave I want. After that, I will select the time slot and date I want through a calendar on the section. I will then click apply after selecting those.
<b>Interviewer:</b>	<b>Okay, thank you. Are there any issues with applying leave / submitting claims / pay slip?</b>
Interviewee:	No, however I feel like more could be added to improve efficiency.
<b>Interviewer:</b>	<b>Oh, could you elaborate more on that?</b>
Interviewee:	For example, the calendar shown on all the pages does not include anything except the date. I feel like colleague leave could be included.
<b>Interviewer:</b>	<b>I see, thank you. How do you contact your boss if you need to take an emergency leave? Is it through the portal/application?</b>
Interviewee:	No, I contacted my boss through text.
<b>Interviewer:</b>	<b>Could you please briefly describe the process?</b>
Interviewee:	I contacted my boss through text via whatsapp first. After my emergency leave was approved through text, I will then need to apply in the application afterwards.
<b>Interviewer:</b>	<b>Apart from the above stated features, what other features would you like to have in a HR portal/application?</b>
Interviewee:	Nope. I can't think of any features that I would like to have.
<b>Interviewer:</b>	<b>Okay, that will be all. Thank you so much!</b>

b) Observation

	Direct Observation 1	Direct Observation 2
Background:	Sports trainer company that sends sports trainers to soccer games to ensure the safety of players.	A Platoon Commander (PC) who is responsible to manage all training and administrative matter of his operators
Platform Used:	Excel, WhatsApp	Mobile Application, Excel, WhatsApp, Email
Features Provided:	Payslip, Leave, Claims, Calendar	Leave, Claims
Pain points:	<p><u>Payslip</u></p> <ul style="list-style-type: none"> <li>Difficult for users to double-check their working hours and the payslip working hours tally.</li> </ul> <p><u>Leave</u></p> <ul style="list-style-type: none"> <li>Sometimes HR misses out on the user text for leave.</li> </ul> <p><u>Claim</u></p> <ul style="list-style-type: none"> <li>The user doesn't have a centralized place to view claims. Have to scroll through WhatsApp conversation with HR to find.</li> </ul> <p><u>Calendar / "Home page"</u></p> <ul style="list-style-type: none"> <li>The user is able to see all the company activities planned out for the week, which makes it difficult for the user to find their activities</li> </ul>	<p><u>Payslip</u></p> <ul style="list-style-type: none"> <li>No features implemented to view or downloading of payslip</li> </ul> <p><u>Leave</u></p> <ul style="list-style-type: none"> <li>A dual process for the request of approval is needed (verbal and through the system)</li> <li>Decentralised information (different excel sheets)</li> </ul> <p><u>Claim</u></p> <ul style="list-style-type: none"> <li>A dual process for the request of approval is needed (verbal and through the system)</li> <li>Decentralised information (different excel sheets)</li> </ul> <p><u>Attendance</u></p> <ul style="list-style-type: none"> <li>Decentralised system and tools being used for the tracking of attendance</li> </ul>

Summary of Direct Observations.

Observation Transcript 1	Remarks
<p><b>Background Information</b></p> <p>Sports trainer company that sends sports trainers to soccer games to ensure the safety of players.</p>	<p>No video was recorded, as per the participant's request. Observations were directly transcribed.</p>
<p><b>Home page</b></p> <p>The participant's "home page" is an excel sheet.</p> <p>The home page of the excel sheet contains a calendar of the different games from Monday to Sunday.</p> <p>Each excel cell has an activity, a timing, and a person.</p> <p>The different games are color-coded to make it easier to differentiate the different games.</p> <p>On the lowest column of the excel sheet, there is a row that shows whether each person.</p>	



<p>HR is the only person with access to the excel sheet.</p> <p>Observed pain point of home page:</p> <ul style="list-style-type: none"> <li>• Overlapping soccer games results in HR having to insert a new column and merging cells.</li> <li>• Sports trainers on the ground find it quite messy, too many colors as well.</li> <li>• Sports trainers have to find their names in the excel sheet to see if they are working that day. There were a few cases they missed out their name, resulting in no one showing up for the game.</li> </ul>	
<p><b>Attendance</b></p> <p>No attendance is marked. However, if people end earlier or later than expected, they are supposed to tell HR.</p> <p>An observed pain point for attendance:</p> <ul style="list-style-type: none"> <li>• Sports trainers are required to send directly to HR via WhatsApp, what time they finish, reasons for ending late. Sometimes there's no response from HR, uncertain if HR missed the message.</li> </ul>	
<p><b>Leave</b></p> <p>Application of leave is sent directly to HR on WhatsApp. HR records the leave on the excel document.</p> <p>Observed pain point:</p> <ul style="list-style-type: none"> <li>• HR has to manually type in the name of the person taking the leave, on many different columns as well</li> <li>• Sports trainers are sometimes called during the leave. As HR forgot to record it in excel.</li> </ul>	
<p><b>Pay Slip</b></p> <p>Payslips are typed individually by the HR person on a word template.</p> <p>Observed pain point:</p> <ul style="list-style-type: none"> <li>• HR has to copy and paste the template at least 10 times.</li> <li>• HR has to individually send out payslips to each and every person's email.</li> <li>• For sports trainers to double-check</li> </ul>	
<p><b>Updates</b></p> <p>Every time there's a small update. HR has to the mass email blast, everyone.</p> <p>Observed pain points:</p> <ul style="list-style-type: none"> <li>• Sports trainers find multiple copies of the PDF files. Which can be confusing. Sometimes they miss out on the latest file, resulting in them</li> </ul>	

traveling to soccer games which were cancelled.	
<b>Claims</b> Claims are sent directly to HR. A photo of the receipt, followed by the person having to physically go down to pass HR the receipt.  Observed pain points: <ul style="list-style-type: none"> <li>HR has to manually type down the claims into the payslip</li> </ul>	

Observation Transcript 2	Remarks
<b>Background Information</b> A Platoon Commander (PC) with 40 operators under his command. He is required to ensure that his operators clear their annual leave while: <ol style="list-style-type: none"> <li>Maintaining a 50% manpower redcon within the platoon</li> <li>Not missing out on important training dates</li> </ol>	No video was recorded, as per the participant's request.  Observations were directly transcribed.
<b>Login</b> The application requires users to login using their Singpass which includes a 2FA authentication. Upon login, the home page would display four options of: Leave, Medical, Dental and Transport for users to select on.	
<b>Leave</b> Under selection of the Leave option, users are presented with four buttons of: Apply Leave, View Quota, View Status and Approve Leave.  Observed process: When applying for leave, each operator would approach the PC to request for verbal approval to take leave on the intended dates. The PC would then perform the following checks from two sources: (1) the training programme to ensure no overlapping of leave with important training events and (2) internal excel sheet used for tracking of leave from individual operators to ensure certain thresholds were being met. If either of the two conditions were not being met, the approval of leave would be declined and the operator would be required to source for new dates once again and repeat the request for approval process. If the request is being approved, the operator would then apply the leave through the application and a request would appear in the HR application which requires the PC to accept it through the system.  Pain point: <ul style="list-style-type: none"> <li>A dual process for the request of approval is needed (verbal and through the system)</li> <li>Decentralised information (different excel sheets)</li> </ul>	

<p><b>Claims</b></p> <p>Under the section of claims, users are allowed to apply for medical and dental claims. Selecting either of which would display the same options of allowing users to apply for the specific claims, view the balance, viewing of the status and the approved claim.</p> <p>Observed process:</p> <p>Submitting of claims would require the operators to first input the invoice/receipt identification into the application as well as keeping two hardcopies of the invoice/receipt which one of which would be submitted to the HR department through the PC and another for self safekeep. The process of approving claims by the HR department is not visible to either the PC nor the operators. The only way to know if the claims had been processed by the system is when (1) the claims amount had been credited into the operators' bank account or (2) constant checking with the HR department. The approval of claims takes roughly three months upon submission of the document to the HR department.</p> <p>Pain point:</p> <ul style="list-style-type: none"> <li>• Inefficient steps taken for the submission of claims (relies on the submission of hardcopy invoice/receipt)</li> <li>• Lack of visibility on the claim process</li> </ul>	
<p><b>Attendance</b></p> <p>Taking and reporting of attendance still relies heavily on chat groups and excel sheet. The PC would be required to collate the strength for the day and after which input the details into the excel sheet individually and submit it to the HR department via email.</p> <p>Pain point:</p> <ul style="list-style-type: none"> <li>• Decentralised system and tools being used for the tracking of attendance</li> </ul>	
<p><b>Payslip</b></p> <p>No viewing or downloading of payslip features available in the application.</p>	

c) Survey

Total responses collected: 35

11.4% (4 responses) are people whose company's HR process is **not yet digitalised**

Preferred platform:	Website Application (50%) or Both, Mobile and website application (50%)
Preferred log-in method	Pin (75%)
Most important feature:	Payslip
Preferred attendance taking method:	Facial Recognition (50%)
Issues faced when applying for leaves:	<ul style="list-style-type: none"> <li>• Troubles in coordinating leave (50%)</li> <li>• Constant check to see if manager approve (50%)</li> <li>• Unsure how many leaves are there left (50%)</li> <li>• Lack of visibility of colleagues' leaves (50%)</li> </ul>
Issues faced when submitting claims:	<ul style="list-style-type: none"> <li>• Constant check to see if manager approve (50%)</li> </ul>

Summary of Results (Not digitalised)

48% (17 responses) and 40% (14 responses) are people whose company's HR process is **fully digitised** and **partially digitalised** respectively.

Mostly used platform:	Website Application (80%)
Preferred log-in method:	Password (21%)
Areas for improvement:	Functionality (54.3%)
Most important feature:	Leaves
Preferred method of taking attendance:	Fingerprint scanning (34.3%)
Issues faced when applying for leaves:	Lack of visibility of colleagues' leaves (54.3%)
Issues faced when submitting claims:	Lack of visibility of claim status (51.4%)

Summary of Results (Partially / Fully Digitalised)

Link to form: <https://forms.gle/6qhXwquZ9uwyAzvK9>

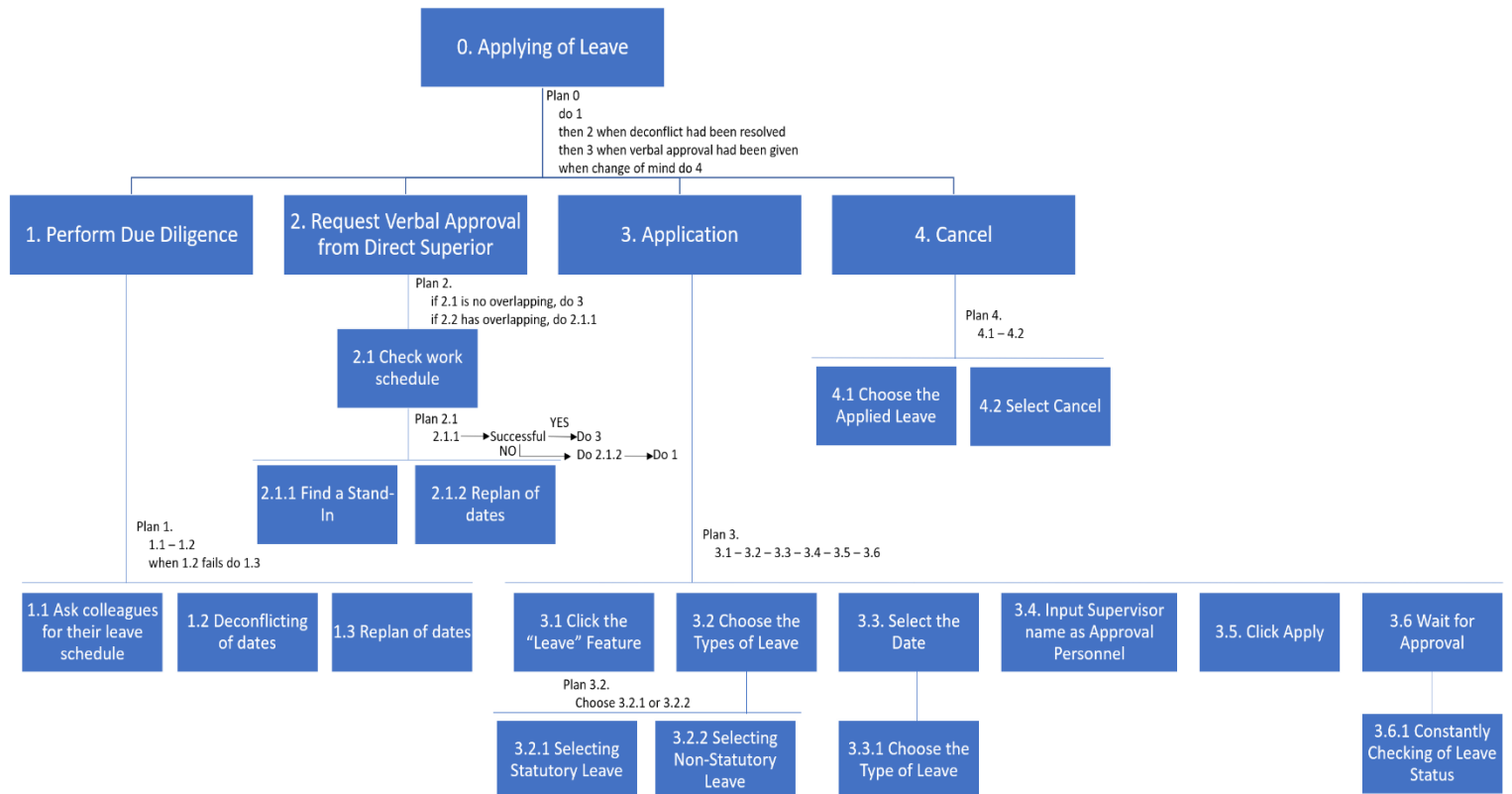
Link to responses: [https://docs.google.com/forms/d/1eGh1\\_HufPmkVlhM8h0aCNN2F-6EzqJsfLrNleSztidk/edit](https://docs.google.com/forms/d/1eGh1_HufPmkVlhM8h0aCNN2F-6EzqJsfLrNleSztidk/edit)

S/N	Main Questions
1	What is your working status? <ul style="list-style-type: none"><li>• Freelancer</li><li>• Part-Time / Contract Staff</li><li>• Full Time Staff</li><li>• Other:</li></ul>
2	What is your position in the company? <ul style="list-style-type: none"><li>• Employee</li><li>• Employer</li></ul>
3	Which platform was being used? <ul style="list-style-type: none"><li>• Mobile Application</li><li>• Web Application</li></ul>
4	Which log-in authentication method(s) are being preferred? <ul style="list-style-type: none"><li>• Pin</li><li>• Password</li><li>• Facial recognition</li></ul>
5	What are the areas for improvement on the company's implementation? <ul style="list-style-type: none"><li>• Functionality</li><li>• Navigation</li><li>• Aesthetic</li><li>• Stability</li></ul>
6	What is the most important feature of the HR portal? <ul style="list-style-type: none"><li>• Attendance</li><li>• Leaves</li><li>• Payslip</li><li>• Calendar</li><li>• Claims</li></ul>
7	Apart from the above stated modules (Attendance, Leaves, Payslip, Calendar, Claims), what other modules would u like to have in a HR portal/application.
8	Which method of taking attendance is being preferred? <ul style="list-style-type: none"><li>• Fingerprint scanning</li><li>• Card</li><li>• Facial recognition</li><li>• QR code</li></ul>
9	What issues were faced when applying for leave? <ul style="list-style-type: none"><li>• Troubles in the coordination of leaves taking with colleagues</li><li>• Having to constantly check if your manager has approved</li><li>• Not knowing how many days of leave do you have</li></ul>

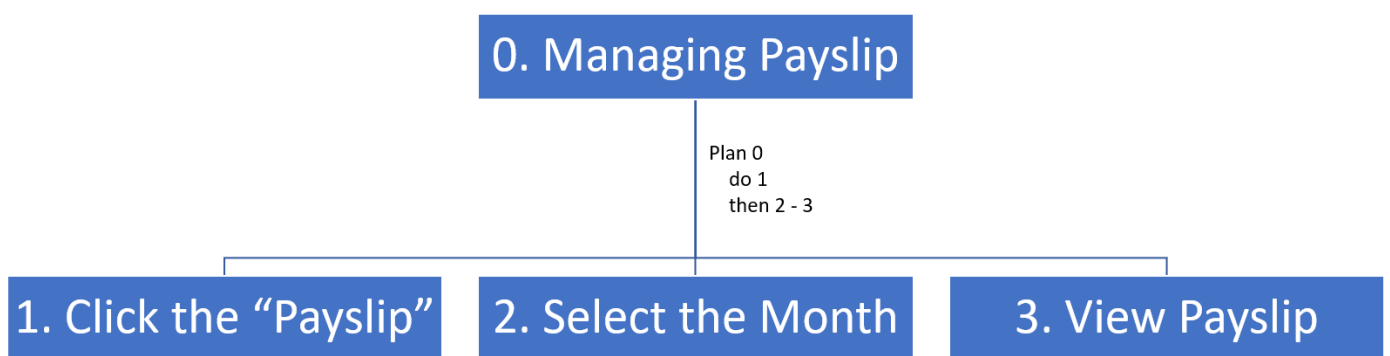
	<ul style="list-style-type: none"> <li>• Lacks visibility of colleagues going/are on leaves</li> </ul>
10	Describe your process for taking leave.
11	<p>What issues were faced when submitting claims?</p> <ul style="list-style-type: none"> <li>• Having to constantly check if your manager has approved</li> <li>• Tedious claim processes</li> <li>• Lacks visibility of the claim status</li> </ul>
12	Describe your process for submitting claims.

## Annex B

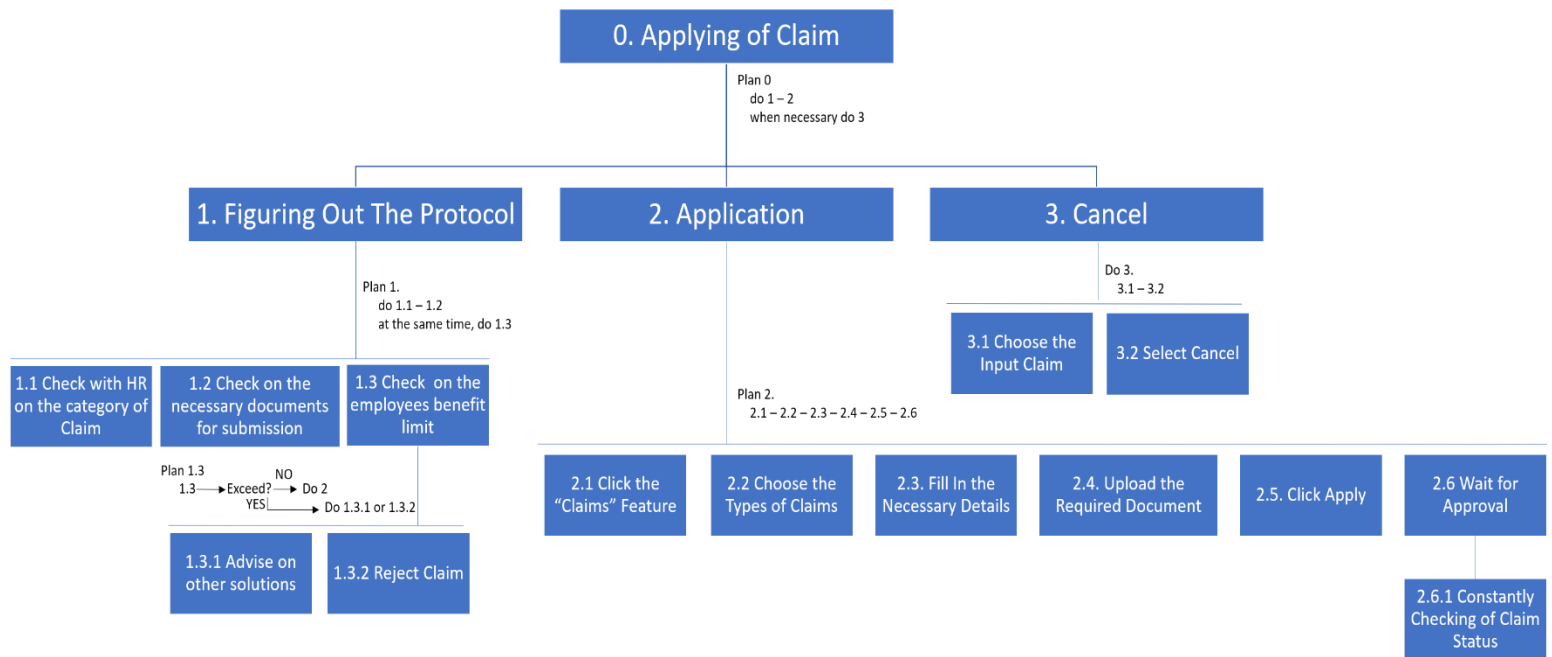
### Task Analysis



### Applying of Leaves.



### Management of Payslip.



### Applying of Claim.