PROJECT MANAGEMENT PLAN
SwedPouch for SwedBank™

Rahul Mallavajjala	Sairam Yepuru	Avutu Neeraj Reddy
9506224519	9412175375	9411053375
ramb16@students.bth.se	saye16@students.bth.se	neav16@students.bth.se

Group Members Contribution:

Name	Idea Creation	Report Writing
Rahul Mallavajjala	33.33%	33.33%
SaiRam Yepuru	33.33%	33.33%
Avutu Neeraj Reddy	33.33%	33.33%

Table 1: Team members Contribution

1. Introduction:

This document is a detailed Project Management Plan (PMP) of technology advancement for Swedbank™ in Sweden. A new mobile application (SwedPouch) is developed for Android Smartphone using the agile software development methodology. The overall development process is scheduled for 14 weeks.

1.1. System Description:

Swedbank™ is a well renowned bank in Sweden that was established in 1820. It strives to help people achieve a higher standard of living and greater security through financial planning. As of 31st Dec'15, Swedbank™ has an approximate of 4 Million private customers, 2.65K Corporate customers and 3.9 Million Internet Banking customers[1].

Smartphones have become popular over the past years, the usage of mobiles for Information and Communication technology is reportedly higher than other usage characteristics. The quantitative analysis of the mobile usage for ICT can be observed in the research of Ahmad Rahmati and Lin Zhong [2]. SwedPouch is an initiative of Swedbank™ which is a MasterCard™ powered e-wallet. It allows the users to perform feasible banking and e-commerce operations thru an Android based smartphone application.

1.2. Project Scope:

With advancement in technology and evolution of gadgets, customers expect new features and easily performable operations for their financial dealings. Taking this into consideration, Swedbank™ also requires development of a new tool that simplifies their offered services with a wide range of new features. SwedPouch offers various banking operations such as online transactions, bill payments, mobile recharges, online/offline shopping, etc., right from a smartphone application. The list of features is described in detail in the product features section. This application is developed only for Android smartphones.

1.3. Project Objectives:

The project focuses on developing an e-wallet and banking mobile application for Android smartphone that has to be delivered within a period of 14 weeks carried out in three sprints. This project management plan is developed in order to achieve all the objectives listed below:

- Development of an e-wallet that eases the user to control and observe the flow of the money within the account.
- Individual SwedPouch account creation facility that provides confidentiality.
- Adding the built-in MasterCard™ feature that lets the user shop anywhere online.
- To make the controls easier for the user to add money to the SwedPouch account from any bank.
- To add clear options for easier bill payments online.
- Maintaining secure accounts of the customer by using trusted servers to store the data.
- To attract customers by following the principles and techniques for developing effective Graphical User Interface elements [3].
- To incorporate a feature of Near Field Communication (NFC) in order to carry offline payments via smartphone, as consumers would have better control and management over their finances and spending with NFC [4].
- Adding an option of easy and safe money transfer to any other bank account/mobile number/SwedPouch account.
- To maintain a proper project schedule and right execution of the product features by utilizing a project tracking tool named JIRA [5].

2. Stakeholders:

Stakeholders are the individuals or an organization that directly or indirectly impacts the completion or execution of a project [6]. In order to implement a successful project, the management team must ensure to meet the expectations and requirements of their stakeholders. Each objective in a project either has a positive or a negative influence. So, the Project manager along with their team must try to maintain a healthy relationship with their stakeholders. A brief description of their needs and potential influences on our stakeholders are depicted in the table below:

STAKEHOLDERS	DESCRIPTION OF NEEDS	POSITIVE INFLUENCE	NEGATIVE INFLUENCE
Project Manager/ Scrum Master	• The Project Manager guides his team and supports them to systematically carry out their allotted work. • The Sprint review meetings should be organized under his observation. • The plan of action must be strategized by the manger based on the updates progressed. • Project Manager is an embodiment of the functional role of the project and is answerable to his CEO.	• By segregating work and scheduling the timelines, the manager ensures that the project can be completed in the given time. • A manager, motivating his team can help them grow in personal and professional walks of life. • By creating a positive impact on his team, a project manager sets an example of a true leader.	• An ill-experienced manager ruins the experience of his team. • Non-punctual behavior of the manager could delay the project, exceeding the deadlines. • Improper monitoring over the team may result in a non-likely output of the project.
Product	• The Project	• When all the team	• Lack of technical know-

Development Team	Development team must undergo a proper training related to the project. • They should be entailed by all the terms and conditions of the project.	members are accountable and abide by the rules, the outcome of the project can be expected with a high precision. • Experience of senior members comes handy under challenging circumstances of work.	how or improper analysis of working methodology can deteriorate the quality of project. • Non-participation or uncooperative behavior among the team members can affect the progress of the project.
Product Owner/ CEO	• The Product Owner is the highest authority of an organization (SwedBank™) who administers the decision-making, planning and innovation of projects. • The products are launched into the market under his supervision. • He should act as an interface between the organization and the customers.	• The owner provides all the required commodities like capital, workspace, utilities, etc., for the project development. • A CEO must ensure that the work is organized under the professional grounds.	• If the owner fails to channel communication with his subordinates, it lowers the efficiency of the project. • With a narrow mindset and no future vision of the owner, the firm collapses resulting in a downward trend of business.
Customers/ End-users	• Any person with an Android smartphone who uses the SwedPouch application is an end-user. • The users are concerned regarding a secured and privacy protected e-banking platform. • They expect an application that enables them to do hand-free shopping like 'Touch and Pay'[7]. • The users look forward on applications with minimalistic features and multiple functionalities.	• The e-Wallet application uniquely identifies the customers through a secured User Account [8]. • The Bill Payment options are very flexible, varying from a domestic to an international transaction.	• 'Touch and Pay' facility is currently limited only to the Android Smartphone users. • Possibility for a data leak, with the loss of device. • Cannot undo actions in case of user negligence.
Influencers	• Understanding the market flow and fulfilling the customer needs is the major intention.	• In order to deliver full-fledged services, technology is upgraded and R&D is re-innovated, which are the positive influences for a successful project.	• Challenging environment, competition with other banks, copyright issue claims are the most encountered negative influences over the product development.

Table 2: Stakeholders, a brief Description of their Needs and Potential Influences.

3. Product Features:

As per the agile development process, a product backlog is built. A Product backlog is a high-level list of functionality or requirements gathered to develop the product which is built in the initial stage of the project [5]. All the features listed in the backlog are the mandatory functions of the final product that has to be delivered.

PRODUCT BACKLOG			
ID.no	**LIST OF FEATURES**	**DESCRIPTION**	**EFFORT ESTIMATION**
F1	e-Wallet	A virtual wallet that stores the money deposited into it [8]. The user can deposit or withdraw money from the e-wallet at ease.	15 days
F2	User Account	Each user has the facility to open an individual secure account that stores his/her details. This account is also called as the "SwedPouch Account". Every account holds a unique number that allows the user to transfer funds to other SwedPouch accounts with this unique number.	16 days
F3	MasterCard™ Collaboration	SwedPouch is incorporated with Mastercard™, which allows the user to make world-wide purchases online.	3 days
F4	Bill Payments	The option of Bill payments for household services such as electricity, Internet connection, Mobile Services, etc., are set up. These bills are paid virtually by a single tap.	10 days
F5	Money Transfer options.	Popular services such as PayPal™, Western Union™, Skrill™, etc., are included for feasible money transfers worldwide. A one click Wire-Transfer option is also incorporated.	3 days
F6	NFC support	For mobiles that support Near Field Communication (NFC), offline payments can be easily done using smartphones at the time of checkout in a store.	15 days
F7	Credit / Debit Card Alternative.	The application can also store SwedBank™'s Debit/Credit Card details in the application. Alternatively, making the smartphone application a virtual Debit/Credit Card	12 days

Table 3: Product Backlog

The total Effort Estimation based on the Expert Estimation is done using Atlassian JIRA project management tool [5]. The effort estimation also includes the Security tests required for the features.
Total Effort Estimation = F1+F2+F3+F4+F5+F6+F7 = 15+16+3+10+3+15+12 = 74 Days.

4. List of Activities:

The Product features are strategically developed by formulating them into a list of activities. These subtasks run in the background and are hidden from the operational scope. The backlog is planned for a span of 14 weeks, which is divided into three sprints of each 4, 6, 4 weeks respectively.

Strategic considerations of activities into sprints are based on the following properties:

- ➔ *A customer request:* The suggestions from the customers were collected from the product reviews and feedback forms.
- ➔ *A market demand:* The first sprint release would safeguard the assurance of customer's privacy policy.
- ➔ *A technological advance:* It is mandatory to update the products to meets the user expectations. The features from the third sprint release would capture the market attention.

The tasks have been distributed randomly among the developers based on their skill and technical knowledge. Based on the features planned, the Product Owner prioritizes the order of development and then evaluates their effort estimation. The Effort Estimation for a person per week (5 working days) is 7 hours i.e., 35hours/week. The effort estimation is calculated for all the developers in the project team as shown below:

Sprint 1: (4 weeks)

SPRINT BACKLOG			
ID.no	**PRODUCT FEATURES**	**LIST OF ACTIVITIES**	**EFFORT ESTIMATION (in hours)**
F1	User Account	1.1 Create a user profile, which is a unique identifier for every customer.	35 X 2 = 70hrs
		1.2 Access the account using credentials like username and password.	
F2	e-Wallet [8]	2.1 Pay Cash	35 X 2 = 70hrs
		2.2 Check Balance	
		2.3 Link e-Wallet to other cards	

Table 4: Sprint_1 Backlog

Sprint 2: (6 weeks)

ID.no	**PRODUCT FEATURES**	**LIST OF ACTIVITIES**	**EFFORT ESTIMATION**
F3	Bill Payments [9]	3.1 Select an entity and enter the details.	35 X 2 = 70hrs
		3.2 Authenticate the payment using the PIN.	
		3.3 Transaction is encrypted to enable security.	
		3.4 An acknowledgement is generated to notify the status of the transaction.	
F4	Money Transfer options	4.1 Select a Service.	35hrs
		4.2 Select a Payee and enter their details.	
		4.3 Enter the nature of amount and type of currency.	
		4.4 Authenticate the payment using the PIN.	
		4.5 An acknowledgement is generated to notify the status of the transaction.	
		4.6 An acknowledgement is notified when a transaction is received.	
F5	NFC support [10]	5.1 On and place the device in the range <10cm.	35 X 3 = 105hrs
		5.2 Pair and accept device to connect.	

		5.3 Enter the security details to establish a peer-to-peer connection.	
		5.4 Data is transferred through a protected NDEF (NFC Data Exchange Format).	
		5.5 Status of the transaction is notified.	

Table 5: Sprint_2 Backlog

Sprint 3: (4 weeks)

ID.no	PRODUCT FEATURES	LIST OF ACTIVITIES	EFFORT ESTIMATION
F6	Credit / Debit Card Alternative	6.1 Select a Card type.	35hrs
		6.2 Request ID.	
		6.3 Enter details of the Cardholder.	
		6.4 Redirects to F3 or F4.	
		6.5 Displays Card status.	
F7	MasterCard™ Collaboration	7.1 Select a Card type.	35hrs
		7.2 Request ID for an International transaction.	
		7.3 Redirects to F6	
		7.4 Displays Card status.	
F8	Implementation and Testing	8.1 Trail run the application and debug.	35hrs
		8.2 Reassemble the application after rectifying the bugs.	
F9	Documentation	9.0 Document a complete report.	7 X 3 = 21hrs
F10	Product Release	10.1 Final scrutiny of the project.	7 X 2 = 14hrs
		10.2 Product launch.	

Table 6: Sprint_3 Backlog

5. Gantt Chart:

The Gantt chart illustrates the working prototype of the project. It represents the three sprints along with the effort estimation. The Project Features are taken along the X-axis and the Sprint Backlog is plotted on the Y-axis (assuming the start date for the Project as 10/10/2016). The Gantt chart is displayed in the Appendix 1.0.

6. Risk Plan:

Risk management consists of identification, analysis, prioritization and management of possible risks that may arise during life cycle of a project. As scrum does not give any information regarding risks, we need to develop a method for mitigating these risks [11].
Risks in the project can be identified by referring the Boehm's Principles and Practices in Software risk management [12]. Impact and the probability of the risks are assessed and probability of occurrence is rated on a scale of 0-1 and the Impact is rated on the scale of 1-10. Tables for Risk, Impact and Probability are depicted below:

6.1. Technical Risks:

These are the risks that involve faults or unwanted/unexpected contingencies in the technical attributes of the application.

Risk ID:	RISKS	IMPACT (scale of 1-10)	PROBABILITY OF OCCURRENCE (scale of 0-1)	RISK EXPOSURE (Impact*Probability)

R1	NFC features are limited to only NFC supported Android smartphones.	High - 10	0.8	8
R2	Risk of security breaches over user data.	High - 10	0.8	8
R3	Failure to prevent unauthorized transactions due to user negligence.	High - 10	0.5	5
R4	Risk of excessive usage resulting in bandwidth problem over the bank server.	High - 9	0.6	5.4
R5	Server issues resulting in time lag or performance delays.	High - 7	0.4	2.8
R6	Complicated User Interface which makes it tough for a user to perform actions.	High - 7	0.4	2.8

Table 7: Technical Risks Table

6.2. Non - Technical Risks:

These are the risks that involve faults or unwanted/unexpected contingencies in the non - technical attributes such as actors or environmental issues that affect the application.

Risk ID:	RISKS	IMPACT (scale of 1-10)	PROBABILITY OF OCCURRENCE (scale of 0-1)	RISK EXPOSURE (Impact*Probability)
R7	Risk of high capital investment.	Moderate - 5	0.5	2.5
R8	Advanced technology can be competitive but they can be unstable without proper knowledge.	Low - 3	0.3	0.9
R9	Development systems may be affected with unintentional accidents such as power shutdowns, system break-downs, etc.	High - 10	0.5	5
R10	Loss of device with data in the application.	Low - 4	0.5	2
R11	Large space of the application which does not attract downloads on the market.	Moderate - 6	0.4	2.4
R12	Shortcoming in Technical application developers.	High - 6	0.7	4.2

R13	Non-Productive days due to employers' personal issues.	High - 7	0.7	4.9

Table 8: Non-Technical Risks Table

7. Quality Criteria:

The quality of the product is maintained with high precision. This is satisfied by following the attribute check from the ISO/IEC 9126 Product quality model [13].

Quality Criteria – ISO/IEC 9126				
ID.no	**LIST OF FEATURES**	**CHARACTERISTICS**	**SUB - CHARACTERISTICS**	**DESCRIPTION**
F1	e-Wallet	Functionality	Accuracy, Security, Interoperability	• The application should contain accurate values of amount. • The data contained in it should be highly secure with encryptions. • The data contained in the application should retain its present/original state even if there are any external errors such as system breakdown, application shut down, etc. • The User Interface of the wallet should be easy to use and easily understandable by the user. • The functions that the wallet carry should be performed in the most optimal time without a lag or time delay. • The application shouldn't misbehave by performing unwanted operations. • The operations of the wallet should work on any Android smartphone.
		Reliability	Fault Tolerance, Recoverability	
		Usability	Understandability, Operability	
		Efficiency	Time Behavior	
		Maintainability	Stability	
		Portability	Adaptability	
F2	User Account	Functionality	Security	• The User account details are confidential and should be secure. • The user data should not have any errors and the system should remember the fed in data. • The user should easily understand the user Interface to feed in the User details.
		Reliability	Fault Tolerance	
		Usability	Understandability	
F3	MasterCard™ Collaboration	Functionality	Security	• The data of the Master card details should be secure and encrypted.

		Reliability	Maturity	• The usage of the feature of MasterCard™ should be clearly mentioned for easier understanding. • Entered card details should be utilized in an error-free manner to perform desired operations. • A user should be able to utilize the feature from any android smartphone with the application installed.
		Usability	Operability	
		Efficiency	Resource Utilization	
		Portability	Adaptability, Install-ability	
F4	Bill Payments and Money Transfers.	Functionality	Accuracy, Security	• All the Bill payments should be authorized by the user and should be transparent only to the parties involved in the payments. • No bill payment should have any flaw or error during the transaction. If only if the payment has an error, the data should recover to the prior state without any trouble maintaining the fault tolerance. • A user should easily understand the process of making payments thru the application. • A payment shouldn't take long to process and must respond at the earliest with a transactional response. • All the bill payments must be analyzable by the parties involved in it.
		Reliability	Fault Tolerance, Recoverability	
		Usability	Understandability, Operability	
		Efficiency	Time Behavior	
		Maintainability	Analyzability	
F5	NFC support	Reliability	Fault Tolerance, Recoverable	• A NFC transfer should be reliable without any errors; this has to be made sure by installing authorized pin check. • NFC operations should be easy to understand and perform by a user. • There shouldn't be a delay in time during the NFC operations. • NFC operations are only performable on NFC supported payment machines.
		Usability	Understandability, Operability	
		Efficiency	Time Behavior	
		Portability	Install-ability	

<table>
<tr><td rowspan="5">F6</td><td rowspan="5">Credit / Debit Card Alternative.</td><td>Functionality</td><td>Security</td><td rowspan="5">• All the details of the Credit/Debit card should be secured with encryptions.
• The options that direct the user to install the card onto the application should be available.
• Installed Cards on the account must be recoverable with logins and logouts.
• The user must have the option to change the installed card details with ease.
• Installing and replacing a card on the application should be operable.</td></tr>
<tr><td>Usability</td><td>Understandability</td></tr>
<tr><td>Reliability</td><td>Recoverability</td></tr>
<tr><td>Maintainability</td><td>Changeability</td></tr>
<tr><td>Portability</td><td>Replace-ability, Install-ability</td></tr>
</table>

Table 9: Table for Quality Criteria as per ISO/IEC 9126

8. References:

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Appendix 1.0: Gantt chart

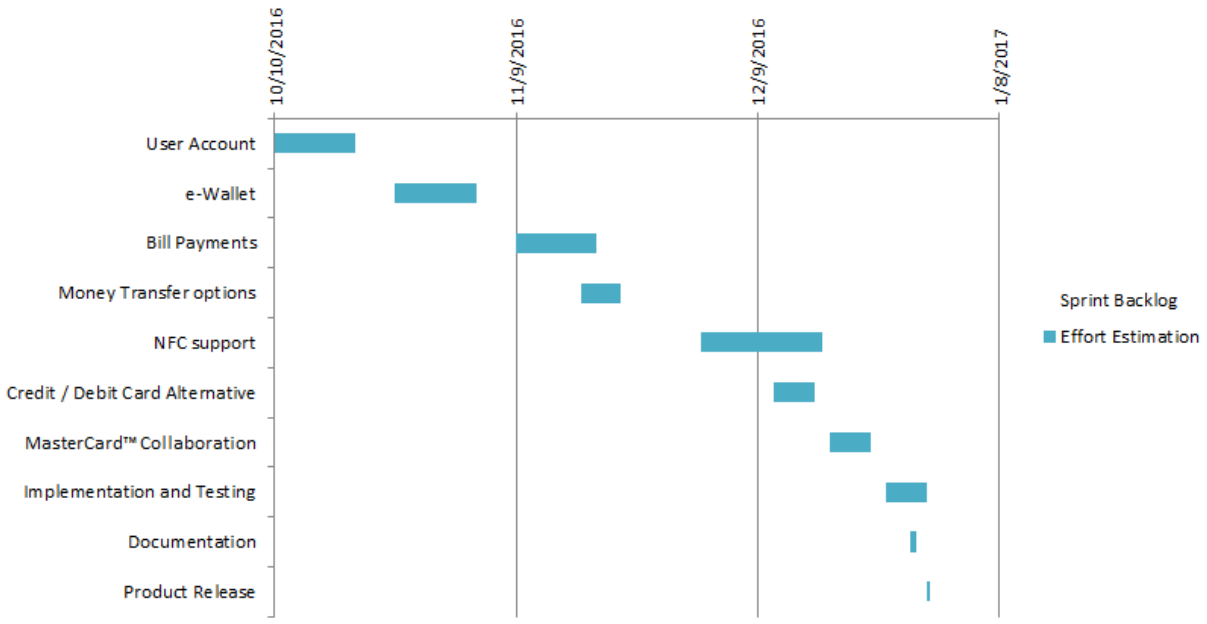

Figure 1: Gantt chart for Project Features vs Effort Estimation.