Project Proposal

On

**Stock Management System**



Mandira Tamang

00172999

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Softwarica College of IT and E-Commerce

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Submitted to : Kiran Rana

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# 1. Introduction

## 1.1 Project Introduction

Stock Management System is software which is widely used by retailers, shopkeepers, manufacturing units and other merchants across different businesses. It is used for managing stock of products in their warehouse or in the shops. This software help in the stock exchange for their database maintaining and generating report corresponding to the data is done on the basis of as per requirement is given.

So, we can say that it helps the management of stock exchange and give exact database management of company according to rules and regulation.

## 1.2 Justification for project

### 1.2.1 Background of the project

This project is about the stock management system and mainly focus on the products that are available in the stock and meet the customers’ requirements. So, this project helps to manage and keep the record of the stock, product and the customer needs.

### 1.2.2 Problem Statement

The project stock management system is for the stock exchange of small shop. This project helps to exchange the stock and keep the record of it and finally deliver it to the customer who orders it. Currently the stock and the product were not nicely managed which create more difficulty and problems to deal with product and customer. So, this project aims to provide the stock management properly and keep the record of stock in manageable way.

## 1.3 Description of the project

### 1.3.1 Features

The features of the project are as follows:

* Point of sale management

It checks payments. Ensures customers transaction completes correctly and the keep the record of it.

* Inventory control

It automates the management of supply levels. It deducts inventory as sales are completed and provides alerts when inventory levels reach pre-defined thresholds.

* Customer management

It keeps the information about the customer and purchase history. It also receives feedback and provides the items from market to the customer.

* Manage the best security and validity of the number of supplies, sales, purchase, expenses, etc.
* It uses less time for approaching data and or information.

# 2. Project Scope

## 2.1 Scope and Limitation of project

**Scope**

The stock management system project provides the information and data of the product and the stock. It also keeps the record of stock and product as well as customers. In this project, there is the information of the time of start and end date as well. I also have mentioned about the possible risk and its solution.

**Limitation**

The limitation of the project is that the project will be developed in the process and structure wise. We can say that the project works under waterfall model. So any changes need to be made in the first step then problem can occur if you are in the second or any other step as the project follow downward like waterfall.

## 2.2 Aims and Objectives

**Aims**:

The main aim of this project is to design the stock management system for a stock exchange which maintain stock data and display how many products are present in the stock and also the details of these products.

This software also gives or stores each and every information about orders.

**Objectives**:

To meet the desired aim, certain objectives are provided which is given down below:

* + - To collect requirements
    - To perform initiation
    - To design database
    - To perform unit testing
    - To perform installation
    - To perform release
    - To perform design
    - To perform planning

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# 3. Development Methodology

## 3.1 Methodology used

I have chosen Waterfall Method for the development of this software. In software development, it seems to follow the rules and regulation which helps to finish the project on the time approaches as it flows in largely one direction in downward like a waterfall. It is very simple to understand and use. Also each phase of waterfall model must be completed fully before the next phase can begin.

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Figure 1: Waterfall Approach

First phase of waterfall model is requirements analysis. In this phase, it is important to document all the requirements to the software. In this phase, I have gathered all the requirements which are necessary for stock management system. Second phase is design where I have design the software specifying the different modules/components of the system, there interfacing, data flow etc. third phase is implementation phase which is also known as the coding phase. In this phase I have made the use of a development environment and database to create the software product. At the next phase, I have tested the software product developed in the previous phase is validated. Here comes the maintenance phase where I have maintained the certain updates in order to remain the software functional in the real-world environment.

## 3.2 Design Pattern

Design Pattern is that which gives the solution to a common problem. It is approved and tested across industry and different programming language. So, with the help of it, there will be less chances of failure. It helps to reduce the cost and helps to maintain the code easily. It also helps for the code reusability.

For this project I am going to use the Model View Controller (MVC) design pattern.

Here, model is responsible for getting and manipulating data (interact with database).

View is actually what the end user sees.

And the controller acts as the kind of middleman between the model and view. The controller will ask the model to get some data from a database and then the controller will take that data and load a view and pass that data into it.

The diagram of MVC design pattern is given down below:

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Figure 2: MVC design pattern

For the MVC design pattern I am going to use the web framework which is Laravel (PHP).

## 3.3 System Architecture

I am going to use the 3-tier system architecture. It is the web based application which is divided into 3 layers.

1. Presentation layer:

Client system handles the presentation layer.

It is the top or the first layer of 3-tier system which transfer data to the application layer.

1. Application layer:

Application server handles application layer.

It moves and process the data between presentation and database layer.

1. Database layer:

Server system handles database layer.

In this layer the information is stored and retrieved from a database or file system.

For example the client wants to login the email. So the client request to server and server request to the database. The database request from the server would send the data to server and server would forward it to the client. After this the email of the client would open.

The figure of the 3-tier system architecture is below:

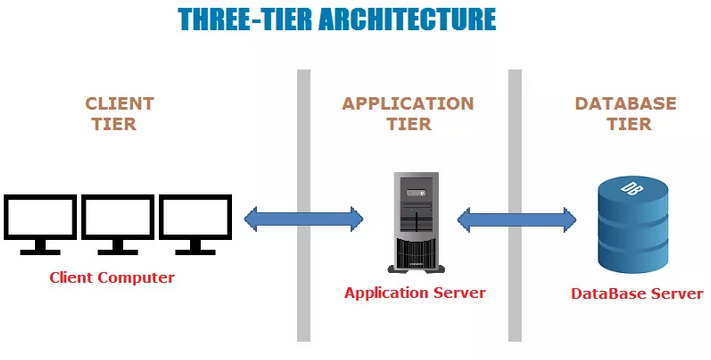


Figure 3: three-tier architecture

# 4. Work Breakdown Structure (WBS) / Scheduling

## 4.1 Work Breakdown Structure

It is the tools use to divide the project work into small pieces so that we can plan, track and manage the project effectively. By breaking work into smaller pieces we can build the check points into the project that allows to measure the progress. So it is the key to planning out a project and managing it easily and effectively. The diagram of WBS for this project is given down below:

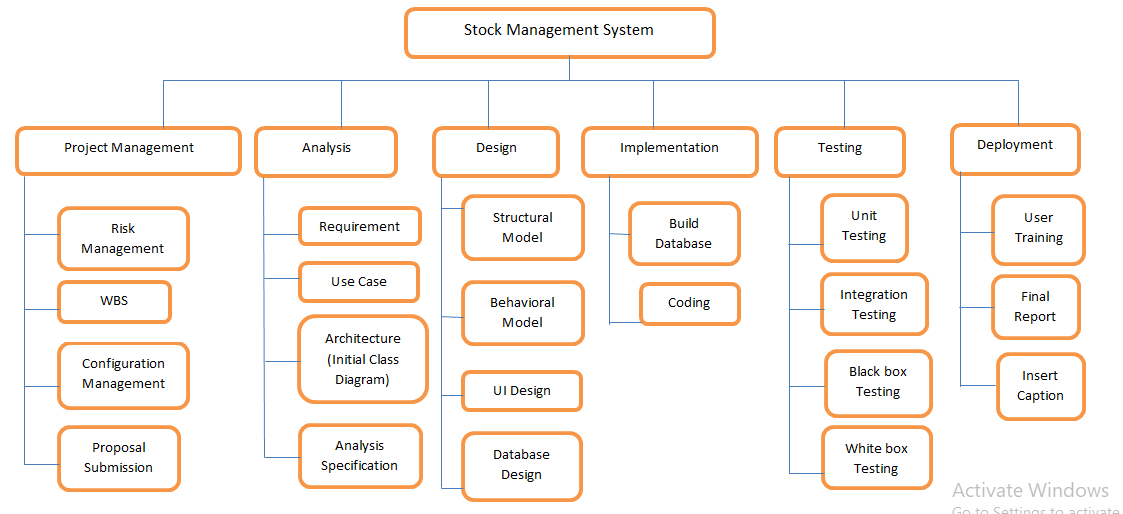


Figure 4:A work Breakdown Structure (WBS)

## 4.2 Milestones

|  |  |
| --- | --- |
| **Milestones** | **Date** |
| **Project Management**  Risk Management  WBS  Configuration Management  Proposal Submission | 21-de-2018 to 3-jan-2019  21-de-2018 to 25-de-2018  26-de-2018 to 27-de-2018  28-de-2018 to 1-jan-2019  2-jan-2019 to 3-jan-2019 |
| **Analysis**  Feasibility Study  Requirement analysis  Planning  Use Case  Architecture ( Initial Class Diagram) | 4-jan-2019 to 28-jan-2019  4-jan-2019 to 5-jan-2019  6-jan-2019 to 11-jan-2019  12-jan-2019 to 16-jan-2019  17-jan-2019 to 21-jan-2019  22-jan-2019 to 28-jan-2019 |
| **Design**  Structural Diagram  Behavioral Diagram  UI Design  Database Design (ER , Data Dictionary) | 29-jan-2019 to 27-feb-2019  29-jan-2019 to 5-feb-2019  6-feb-2019 to 13-jfeb-2019  14-feb-2019 to 19-feb-2019  20-feb-2019 to 27-feb-2019 |
| **Implementation**  Building Database  Coding | 28-feb-2019 to 31-march-2019  28-feb-2019 to 11-march-2019  12-march-2019 to 31-march-2019 |
| **Testing**  Unit Testing  Integration Testing  Blackbox Testing  Whitebox Testing | 1-april-2019 to 10-april-2019  1-april-2019 to 2-april-2019  3-april-2019 to 4-april-2019  5-april-2019 to 7-april-2019  8-april-2019 to 10-april-2019 |
| **Deployment**  User Training  Final Report  Insert Caption | 11-april-2019 to 20-april-2019  11-april-2019 to 14-april-2019  15-april-2019 to 17-april-2019  18-april-2019 to 20-april-2019 |

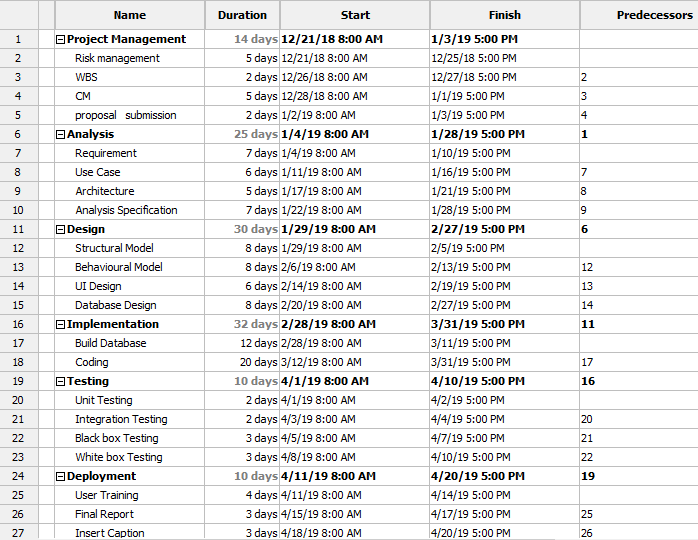
**Description of Milestones:**

* **Project Management (14 days)**
  + For the project management I have allocated the 14 days.
  + For the risk management I have separated the 5 days.
  + For the WBS I have separated the 2 days.
  + For the Configuration Management I have separated the 5 days.
  + For the Proposal Submission I have separated the 2 days.
* **Analysis ( 25 days / month)**
  + For the analysis I have allocated the 25 days.
  + For the requirement I have separated the 7 days.
  + For the Use Case I have separated the 6 days.
  + For the Architecture I have separated the 5 days.
  + For the Analysis Specification I have separated the 7 days.
* **Design( 30 days / month)**
  + For the design part I have allocated the 30 days
  + For the Structural Model I have separated the 8 days.
  + For the Behavioral Model I have separated the 8days.
  + For the UI Design I have separated the 6 days.
  + For the Database Design I have separated the 8 days.
* **Implementation ( 32 days / month)**
  + For the implementation of the project I have allocated the 32 days.
  + For the Build Database I have separated the 12 days.
  + For the Coding I have separated the 20 days.
* **Testing (10 days / month)**
  + For the testing of the project I have allocated the 10 days.
  + For the Unit Testing I have separated the 2 days.
  + For the Integration Testing I have separated the 2 days.
  + For the Blackbox Testing I have separated the 3 days.
  + For the Whitebox Testing I have separated the 3 days.
* **Deployment ( 10 days / month)**
  + For the deployment of the project I have allocated the 10 days.
  + For the User Training I have separated the 4 days.
  + For the Final Report I have separated the 3 days.
  + For the Insert Caption I have separated the 3 days.

## 4.3 Scheduling / Gantt Chart

Scheduling is the process of maintaining the record of start and the end date of the activity. It helps to finish the project on the time and also keep the record of date that we start and end the project. So, it helps to maintain and manage the project easily and effectively.

The Gantt chart for my project with details of the time managed for each activity is shown down below:



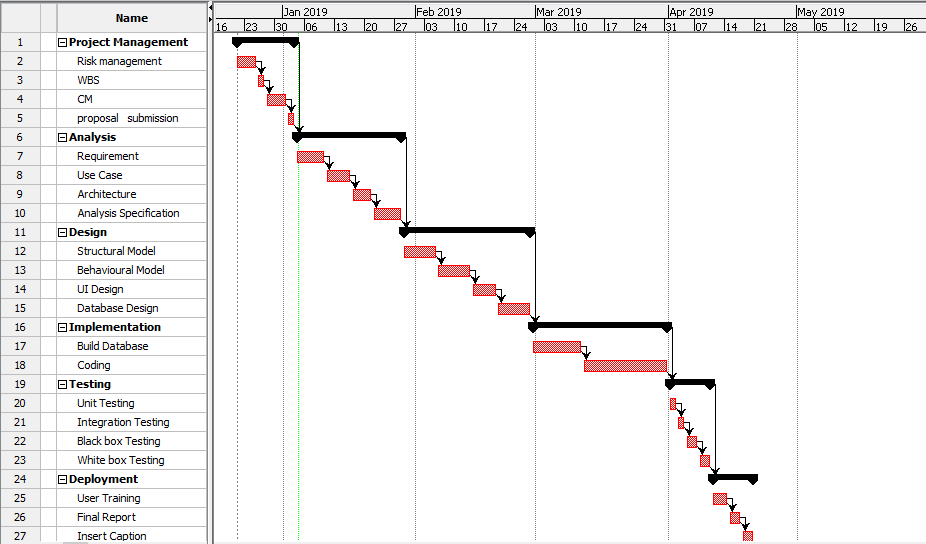
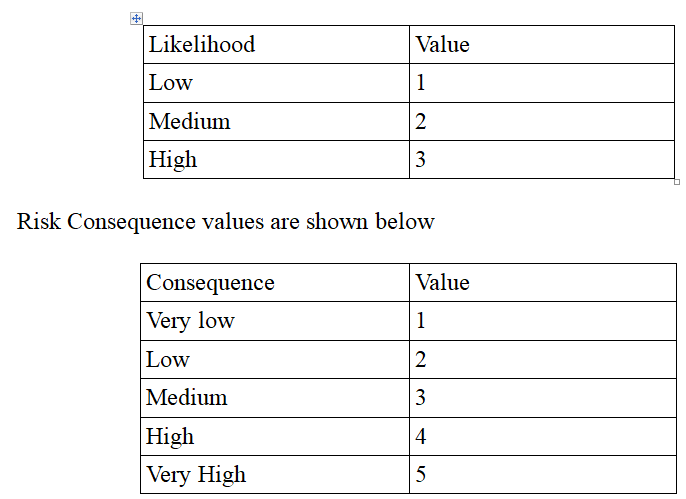
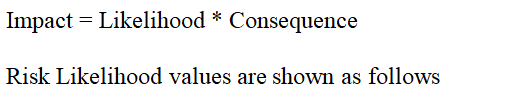


Figure 5: Gantt chart

# 5.Risk Management

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Risk management is the process of managing the risk and the problems that arise. The problems can arise in the project and the software is not surely hundred percentages perfect and problems can occur in the future. So in the given down table I have mentioned the possible risks and the solution to control it.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S. No | Risks | Likelihood | Consequences | Impact | Solution |
| 1 | Loss of data | 2 | 2 | 4 | To avoid the data loss, it should be kept in the drive like for the backup. |
| 2 | Server failure | 1 | 2 | 2 | Sometime the server can fail while doing the project. For prevention the security and backup should be maintained. |
| 3 | Data theft | 2 | 3 | 6 | To avoid from data theft, should maintain the tide security to data with different methods like data encryption, etc. |
| 4 | Threat on the system | 2 | 2 | 4 | Updating or scanning the system should be done time to time so that it will work smoothly. |
| 5 | Lack of planning | 2 | 4 | 8 | The proper planning should be done to avoid the problems that may arise in the future. |
| 6 | Insufficient resources | 2 | 4 | 8 | Collect the required resources for the project. |
| 7 | Lack of budget | 2 | 3 | 6 | Do the proper use of budget and separate the little more budget for project. |

# 6. Configuration Management

Configuration Management is the management that helps to ensure that everyone will get the correct latest and relevant document whenever they pick the document. It tells us that what items needs to be configured. If any changes and problems need to be solved then making change like add, delete and modify the files is done with the help of configuration management.

Here is the diagram of configuration management.

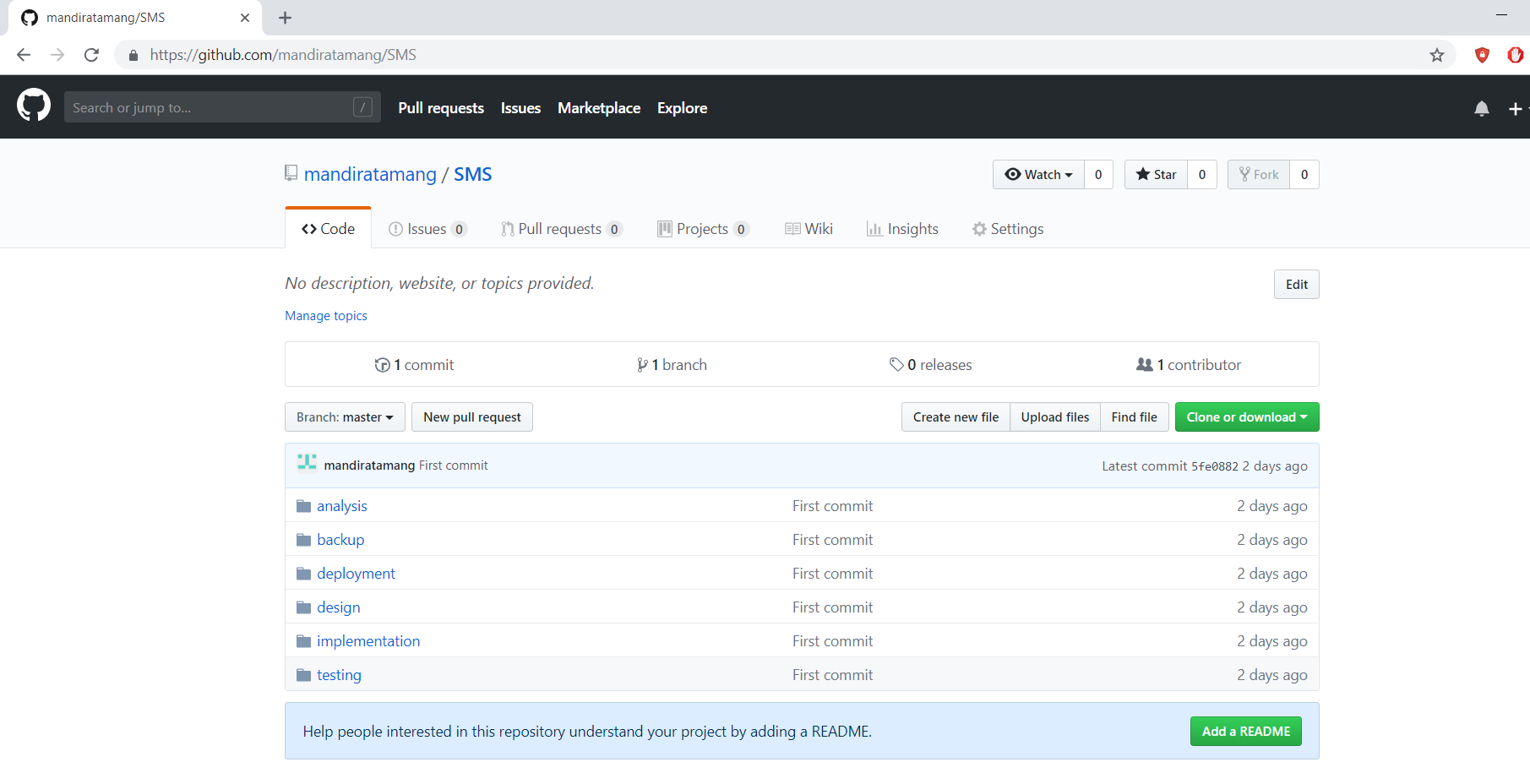
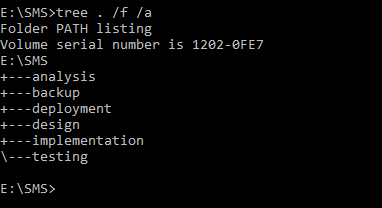


Figure 6: configuration management

# 7. Conclusion of the project

In conclusion, all requirements for the project Stock Management System was successfully designed in designated time. The project is committed to provide customers with the service, support and expertise they require. The proposal shares information by using an automated system that allows to purchase products, check product stocks and to distribute relevant information about the products inventory. Hence, the project for Stock Management System was successfully designed without any obstacles and complications.

# 8. References

Available from: <http://www.tutorialspoint.com>

Available from: [https://www.carajaclasses.com](https://www.youtube.com/redirect?v=ibEd2Tajrk8&event=video_description&redir_token=YGKZjX2ybdw8y704-Pgz62u5USZ8MTU0NjYwOTUwN0AxNTQ2NTIzMTA3&q=https%3A%2F%2Fwww.carajaclasses.com)

Available from: [http://www.lynda.com/Business-Project..](https://www.youtube.com/redirect?event=video_description&redir_token=uJnc85vm6Jgm56lsQ61FdHGmKod8MTU0NjYxMTMyN0AxNTQ2NTI0OTI3&q=http%3A%2F%2Fwww.lynda.com%2FBusiness-Project-Management-tutorials%2FProject-Management-Fundamentals%2F80780-2.html%3Futm_medium%3Dviral%26utm_source%3Dyoutube%26utm_campaign%3Dvideoupload-80780-0302&v=CQ_QfrClfR4)