Faculty of Computers and Information

Cairo University

SOFTWARE ENGINEER "CS 251"

CHART PROJECT

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1. Introduction

1.1 Purpose of the system:

The purpose of this project is to develop a Java app called chart app. This app should be simple, fast and efficient, charts app should be a small app that can be run in a couple of minutes.

To make chart app reachable for as many users as possible, it must be available for downloading over the web.

1.2 Scope of the system:

The chart app provide a perfect way to visualize data using simple charts like “Pie chart, Bar chart, Line chart, Bubble chart …” The chart app should be free to install from the NET.

Users can provide their info using simple insert techniques, this info will act as Temporary database for the chart result displayed to the user.

We will publish this application for students, programmers, Accountants and any business needs that they need to use charts in their work.

Furthermore this app doesn’t need internet connection, but it needs JAVA JDK to run this app in PC.

1.3Defintions,acronyms and abbreviations:

Term	***Definition***
User	Someone who interacts with this app
Admin	Programmer who is having a permission to managing and controlling app.
Chart	A visual display of information
Pie chart	A circular chart divided into triangular areas proportional to the percentages other whole

Bar chart	A chart with bars whose lengths are proportional to quantities
Line chart	Is a type of chart which displays information as a series of data points called 'markers' connected by straight line segments
Bubble chart	Is a type of chart that displays three dimensions of data. Each entity with its triplet (v1, v2, v3) of associated data is plotted as a disk that expresses two of the vi values through the disk's x-y location and the third through its size

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1.4References:

1: Google charts: **http://goo.gl/RWlYIv**

2: SRS Examples**:** **http://goo.gl/v4FPoE**

Document purpose and current system

Purpose:

The purpose of this document is to provide outline the requirements, a logical model and functional and nonfunctional requirements for chart software in a clear and consistent manner.

It contains a general description of the types of users who will be using our application how it is going to work, and what technologies we are using to make it work. We will also outline and describe specific components of the project.

The charts software is designed to create charts and graphs and perform operations on user`s data.

Audience:

There are many distinct roles in each software development project. While the same person often plays more than one role on a given project, it is most useful to consider how every role on the project uses the requirements document.

The Audience of charts software includes:

- Development Project Leader
- Requirements Analyst (test the applications against the requirements)
- System Designer (Design and code the application)
- Development Manager (Track development progress)
- Project Sponsor (Provide the motivation for the project)
- Users
- Clients

Current System :

You can provide tables setting out the figures, and you can talk about numbers, percentages, and relationships forever. However, the chances are that your point will be los if you rely on these alone.

So we need software that take data and make visual representation to present it and make it easy to understand.

For this purpose Google Chart was designed. to provide easy way to make charts and graphs.

our software performs some Google Chart`s functions (Bar Chart, Pie Chart, Line Chart, Bubble Chart) except you do not need internet to use it.

In our software, we focus on charts and graphs. our objective is to satisfy the customer and users (students, accountants, etc...), and to provide a methods to make the process of .making charts and presenting data more and more easy and overcome the limitations
You can make magic with charts. Charts make us smart, allow us to share, give us tips, invite us to learn and can help us remember.

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3. Proposed System

3.1. Overview:

The focus of this project is the development a java chart app; this app which can be used by

- Students
- Accountants
- Programmers
- Any business fields

This app can be run on any OS if u have Java Development Kit (JDK) on your machine.
This app tacks info from user and saves it to draw wanted chart like:

- Pie chart.
- Bar chart.
- Line chart.
- Bubble chat

3.2. Functional Requirements:

Chart app support diff type of users “students, accountants …” .the user task have

- Downloading
- Enter data
- Draw charts
- More …

The user tasks and the behavior of the system lead to the following functional requirements:

3.2.1. Downloading app from web:

User downloading app folder and JDK from web page of chart app; these files don’t depend on OS in your machine.
After opening web page of chart app you should find link to downloading app files on your machine.
Then install JDK on your machine to use this app.

3.2.2. Installing JDK on your machine:

After downloading all app files, now user should install JDK in his machine ,user will follow some easy steps to setup JDK and then use app.

3.2.3. Starting with app:

After complete setup JDK, know user can use the app, first view of system user can see:

- Text fields to enter data which want to draw it
- Button for insert , delete , edit , …
- Button for every chart
- Table to show entered data
- And more…

After user entered data he can update it or delete it and he can choose the char which be more Effective.

3.2.4. Insert data:

Before drawing any chart user should enter data which will be drawn in chart, so user insert data in specific fields and click to insert button the data will show in table to draw it.

3.2.5. Edit data:

After completing insert data the user may change his opinion or can be a mistake so user should be able to change entered data.

So to edit data you should chose the row which you want to update it and then change data and click edit.

At the end you will see data changed correctly.

3.2.6. Delete data:

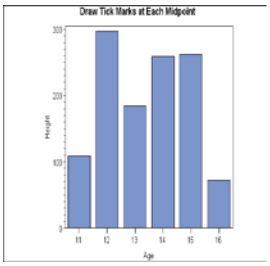
User can delete data all or row by row. If he chooses delete all data table will be empty, or if he chooses delete row after click to delete row the row will removed from table.

3.2.7. Draw Pie chart:

User after inserts all data correctly and make sure about it, know he can draw pie chart.

By click the pie chart button the data will be represented as pie chart like this image.

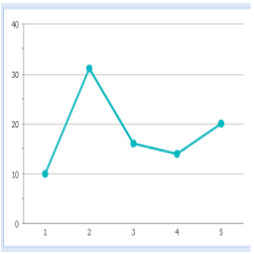
3.2.8. Draw Bar chart:



User after inserts all data correctly and make sure about it, know he can draw Bar chart.

By click the Bar chart button the data will be represented as Bar chart like this image.

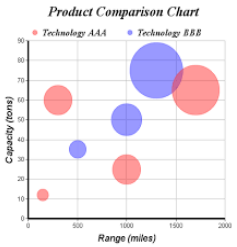
3.2.9. Draw Line chart:



User after inserts all data correctly and make sure about it, know he can draw line chart.

By click the line chart button the data will be represented as line chart like this image.

3.2.10. Draw bubble chart:



User after inserts all data correctly and make sure about it, know he can draw bubble chart.

By click the bubble chart button the data will be represented as bubble chart like this image.

3.3. Nonfunctional Requirements:

3.3.1.Usability:

- Sample to use : the user should be able to use the chart app in easy way like “insert data , edit ,…”.

- Display chart correctly and efficiently.

3.3.2. Reliability:

This app should draw correct chart and draw data correctly.

3.3.3. Performance:

Short response time:

Time which app should be load must be less than 3 sec , and time to draw data must be less than 1 sec.

3.3.4. Supportability:

Diff charts types:

Users can choose between “Bar chart, Pie chart, line chart, Bubble chart “

Market customization:

This app developed to help student, customer, programmer …
so this app should be sample ,easy to use and efficient .

3.3.5. Implementation:

Chart app developed using JAVA.

3.3.6. Interface:

Simple user interface:

The user interface of Chart app should be understandable to the Users on the first view. The user interface is based on a main window, which includes a text field, buttons to “insert, edit,…”. And buttons to draw diff chart like button to draw “Bar char, Pie chart, …”.

3.3.7.Packaging:

The executable Chart app must be available over the web within one download. All needed files must be compressed in standard compressing file type. This is WinZip for Windows.