# SHOPPING CART

# Document Version Control

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# Contents

# Abstract

The business-to- consumer aspect of an online shopping is the most visible business use of the World Wide Web. The primary goal of an online shopping site is to sell goods and services online. This project deals with developing an e- commerce website cart for online shopping. It provides the user with a catalogue of different goods and services available for purchase in the store. In order to facilitate online purchase a shopping cart is provided to the user. This is a project with the objective to develop a basic website where a consumer is provided with a shopping cart application and also to know about the technologies used to develop such an application.

# 1 Introduction

## 1.1 Why this High-Level Design Document?

The purpose of this High-Level Design (HLD) Document is to add the necessary detail to the current project description to represent a suitable model for coding. This document is also intended to help detect contradictions prior to coding, and can be used as a reference manual for how the modules interact at a high level.

The HLD will:

- Present all of the design aspects and define them in detail
- Describe the user interface being implemented
- Describe the hardware and software interfaces
- Describe the performance requirements
- Include design features and the architecture of the project • List and describe the non-functional attributes like:
  - Security o Reliability o Maintainability o Portability o Reusability o Application compatibility o Resource utilization
  - Serviceability

## 1.2 Scope

The HLD documentation presents the structure of the system, such as the database architecture, application architecture (layers), application flow (Navigation), and technology architecture. The HLD uses non-technical to mildly-technical terms which should be understandable to the administrators of the system.

# 2 General Description

## 2.1 Product Perspective

A simple frontend where there are a couple of products and upon clicking on add to cart button the item should be added to the cart and the user can see the items added to the cart on the cart page.

## 2.2 Problem statement

Create a simple frontend where there are a couple of products and upon clicking on add to cart button the item should be added to the cart and the user can see the items added to the cart on the cart page.

## 2.3 PROPOSED SOLUTION

Shopping Cart System customer need not go to the shop for buying the products. He can order the product he wish to buy through the application in his Smartphone. The shop owner will be admin of the system. Shop owner can appoint moderators who will help owner in

managing the customers and product orders. The system also recommends a home delivery system for the purchased products.

## 2.5 Technical Requirements

This document addresses the requirements for detecting the anomalies in the society at early stages and recommending the necessary and rapid action to avoid imbalance in the harmony of the society. Mobile platforms like Ground robots should be used for this purpose. Ground Robots can be based on wheels, tracks, or legs.

- UGV should be able to move on steps and various terrains. Wheel robots or Wheel-Legged robots would better fit kind of tasks.
- These UGVs' should include many sensors like stereo vision cameras, panoramic camera, thermal and infrared detecting systems.
- These can be battery powered or solar powered.
- UGVs' should be equipped with proper computing power to process the images or video of anomalies it had detected.

## 2.6 Data Requirements

Data requirement completely depend on our problem statement.

- We need images data that is balanced and must have at least 1000 images.
- We require at least 30- 40 images for each class label with annotation.
- An image is nothing more than a two-dimensional array of numbers(pixels)
- Pixel value ranging between 0 to 255
- It is defined by the mathematical function (x, y), the value off(x, y) at any point is giving the pixel value at that point of an image
- Original image is in the format of (width, height, no of RGB channels).

There are numerous image file formats out there so it can be hard to know which file type best suits your image needs (on your requirement).

- a TIFF — Tagged image file format
- o BMP — Bitmap image file form
- a JPEG - Joint photographic experts' groups
- o GIF - graphics interchange format
- a PNG — portable network graphics
- a EPS — encapsulated post script
- a RAW image files

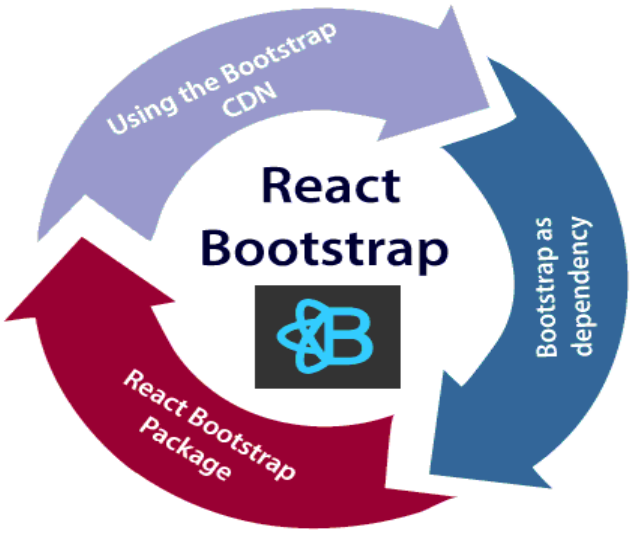
- Tiffs are great for printing. These are lossless image files meaning they don't need to compress or lose any image quality or information. These format images are high quality images.
- bmp format developed by Microsoft for windows. There is no compression or information loss; this format is generally recommended for high quality scans.

- JPEG is a lossy format meaning that the image is compressed to make a smaller file but this loss is not noticeable.
- JPEG is a very popular format for digital cameras.
- GIFs are widely used for web graphics because they are limited to only 256 colours, can allow for transparency and can be animated. These types of files are typically small in size and very portable.
- PNG are a lossless image format; these files are able to handle up to 16 million colours unlike the 256 colours supported by GIF.
- EPS is a common vector type file.
- RAW images that are unprocessed that have been created by a camera or scanner. Digital cameras can shoot in raw, mostly used in photography.

If the data is in video format like (MP4) convert into images based on FPS (no. of frames displayed per second) in real time processing. There are number of tools to convert videos into images. Using cv we can convert video into images

## 2.7 Tools used

React library is used to build this project with some other front-end development framework for the creation of UI. React-router-Dom react-icons, faker for fake shopping-cart, react-bootstrap are also used.




### 7.1 Hardware Requirements

There are no requirements of hardware.

## 2.8 Constraints

The shopping cart must be user friendly, as easy as possible and users should not be required to know any of the backend workings.

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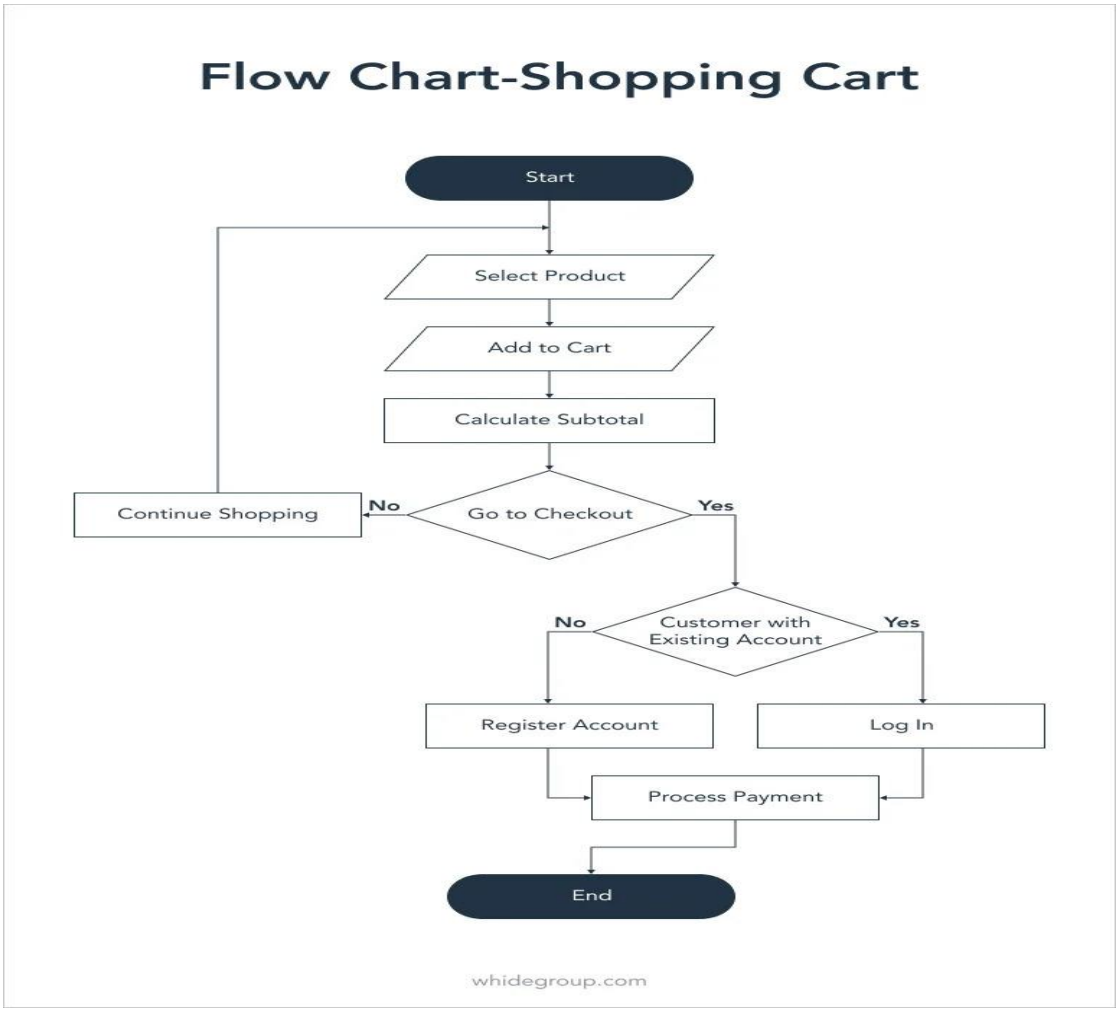
# 3 Design Details

## 3.1 Process Flow

For identifying the different types of anomalies, we will use a deep learning base model. Below is the process flow diagram is as shown below.

## Proposed methodology



## 3.3 Error Handling

Should errors be encountered, an explanation will be displayed as to what went wrong? An error will be defined as anything that falls outside the normal and intended usage.

## 4.1 Reusability

The code written and the components used should have the ability to be reused with no problems.

## 4.3 Resource Utilization

When any task is performed, it will likely use all the processing power available until that function is finished.

## 4.4 Deployment


# 6 Conclusion

- Shopping Cart is a foundation for any online store.
- Shopping Cart have some key element.
- Get some limited tracking details about customer.
- Available number of shopping cart solution with different flat forms.
- Users needed to decide most suitable solution for their business.