Evaluation of JVC Kenwood audio & Multimedia devices

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Abstract: the objective of the JVCKENWOOD testing project is to evaluate Next Generation Automotive infotainment systems that provide audio/video entertainment to the user. It contains hardware and software. The automotive infotainment systems that consist of radios, DVD/CD players, navigation systems, video players, USB and Bluetooth connectivity which can be controlled by dashboard knobs and hands-free voice control or by touch screen.

The scope of this engagement is to verify the device functionalities are met as per expectation before it is released to the Global market. To evaluate the huge volume of Audio and Multimedia device checklists parallel by using different audio and multimedia devices and to meet the Market release target. Prepared a customized evaluation plan which consists of work done Vs Pending work. As an average, the Evaluation Engineer should take only 2 Minutes per checkpoint checking. This plan is monitored on an Hourly/Daily basis and shared with the client daily. This plan gives an idea that how many hours we are having in hand and how many hours of pending work [Cricket scoreboard strategy] By following this strategy we were able to deliver the 2 planned market releases ON-TIME.

Used Multi-language marker file and Google Translate to check the MM and Audio device multilingual part which reduced the native language speaker support to validate the different language strings. Completely designed infotainment in which it consists of different iOS, Android, Navigation devices, Speakers, Antennas, Different Audio/Video file format libraries, USB, Card Readers, and Regulated power adapters to support the car infotainment evaluation. This helped the client to achieve the delivery on time.

Index Terms - **JVC KENWOOD and Infotainment system.**

I. INTRODUCTION

Introduction System Testing is used to test the software and project. It also uses for testing the quality of the product. Testing is conducted at the end of the job done. This test is to find some errors and to check whether it is working properly or not. It is used to find the system is working neither properly in normal time nor only in occasional time.

In the Evaluation of JVC Kenwood audio and Multimedia devices particularly the testing concepts are based on the following testing process.

1. Manual testing
2. System testing
3. Functional testing

1. Manual testing

Manual testing is the testing process in which finding the errors and bugs in the software program. Testers are very important in finding the errors and to find the application is working properly or not

2. System testing

The system testing is conducted for a complete system including outside peripherals. And it checks the interaction between other components. The system testing consists of two types includes block box and white box testing. The system tests were done by using black box testing, which does not need inner design and logic of the code.

3. Functional testing

Functional testing is the testing in which test cases are prepared and find the application based on that. It is used to find the client requirement specification and to find is it satisfying the condition of the client. It is used to find failures.
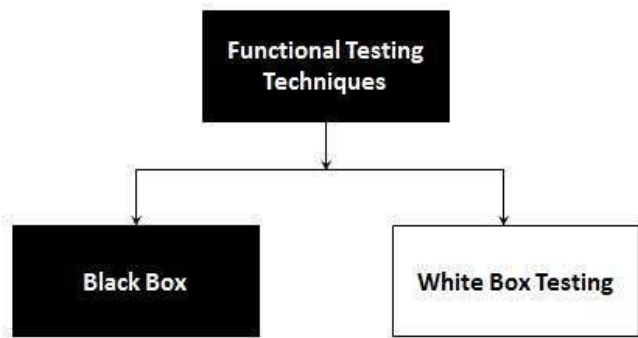
Figure 1.1: Types of functional testing

II.   LITERATURE REVIEW

- **Spring Web MVC Framework for rapid open source J2EE application development: a case study**
  The development of Web applications is a high demand in today's life. And this is the time to develop an application accurately and efficiently. This increases productivity and decreases complexity. The main focus is without using enterprise java beans (EJB), how to create the J2EE-complaint software. The spring framework is used as an alternative to EJB. The spring framework is the most disruptive and fewer services. It gives more productivity and makes less complexity.

- ## A model of exceptions in sales-order-processing workflows
  In this paper, make-to-stock companies are described by using sales-order-processing. Mainly this model is used to find the future generation satisfactory based on sop requirements.

III.   BACKGROUND STUDY

3.1 PROBLEM ANALYSIS

In the Evaluation of JVC Kenwood audio and Multimedia devices, the problem analysis can be explained by considering by taking some examples.
 Related to song analysis
 1. Symptoms: In all android terminals can we use this application?
 Remedies:-In Android OS 2.2 one can use this application.
 2. Symptoms: Is this move from application to SD card?
 Remedies: It does not move. It is impossible.
 3. Symptoms: For car audio, which kind of android devices can be used?
 Remedies: By using a USB device, an Android device connected to the car audio system.
 4. Symptoms: when the device is connected to a car system, can another application be used?
 Remedies: The SD card can't be used.

3.2 DESIGN AND DEVELOPMENT OF SOLUTIONS

For testing software, one should write and create the test cases. For finding a large range of possibilities a test analysis and test conditions are used. It gives the plan and idea. In the case of test cases need to be specific. And need a correct input. And incorrect input is not useful. If one should not know about how the system works with input than this test is failed.

3.3 INVESTIGATION OF A PROBLEM

In the Evaluation of JVC Kenwood devices, an investigation can be done by using JIRA tools it is a bug removal tool. The devices may not compatible with the versions that the clients as developed by that the problem will be discussed with the client side by sending queries to them. They will reply like that problem [4] may be occurred due to a software bug and it will be resolved in the next versions or they will provide other versions for that product. This is one of the ways the problem will be investigated in the evaluation of JVC Kenwood audio and Multimedia devices.

3.4 MODERN TOOL USAGE

JIRA tool is used in many software companies. It is used for management of project and tracking issue. To achieve agile,

managers are uses this Jira tool.

- ➢ **JIRA Scheme**
  The JIRA scheme is used in many projects. It consists of configuration settings. It consists of configuration fields, custom fields, alerts using notification, and types of issues.
- ➢ **What is JIRA Issue?**
  JIRA issue is the issue of track bugs and issues. There are two types of issues in Jira scheme includes:-

Default Issue Type Scheme: - In this scheme new issues are added to this scheme.

Agile Scrum Issue Type Scheme: - The project associated with Agile Scrum. It helps find issues.

IV.　　Images of JVC Kenwood audio devices

Figure 1.2: JVC audio device

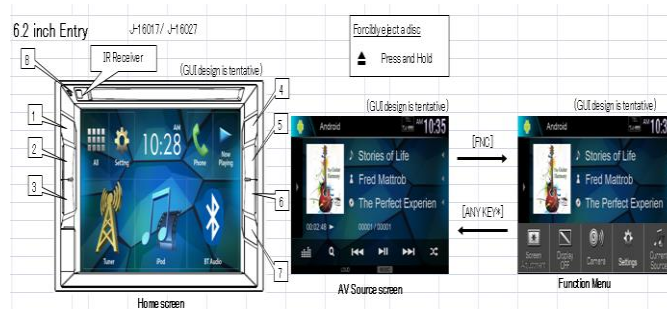**Figure 1.3: Kenwood audio device**

Figure 1.4: JVC Multimedia device

Figure 1.5:-Multimedia working screenshot

Figure 1.6: Screen shot of Checklist

V. TEST CASES

The test cases are used for testing tasks. The test cases use steps, conditions, and inputs for testing purposes. This test is performed to find the software whether it pass or fail.

VI. RESULTS AND ANALYSIS

The work break down the structure of the project is listed in the below figure which applied for sales dashboard software.

VII. CONCLUSION

Extending the business performance modelling framework by providing several new models that enable the process of JVC Kenwood devices design. The management requirement is partially met by implementing the enhanced features. Devices have been designed to be in real-time, include historical and future data (if possible), including colorful graphs and charts for better visual.

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