**Software Test Plan**

* **Introduction**

Software testing is a critical element of software quality assurance and represents the ultimate review of specification, design, and coding. Test Automation is the best way to increase the effectiveness, efficiency and coverage of our software testing.

Test objectives are toprovide adequate coverage metrics and requirements validation to verify that the functionality of CARGURUS works as expected.

**2. SCOPE**

CARGURUS will be tested for its functionality to ensure proper application navigation, data entry, processing, and retrieval.

Nonfunctional testing such as stress, performance or logical database currently will not be tested.

**3. Features To Be Tested**

*(Identify all software features and combinations of software features to be tested. Identify the test design specifications associated with each feature and each combination of features.)*

**4. Features Not To Be Tested**

*(Identify all features and specific combinations of features that will not be tested along with the reasons.)*

**5. TEST Approach**

*(Describe the overall approaches to testing. The approach should be described in sufficient detail to permit identification of the major testing tasks and estimation of the time required to do each task. Identify the types of testing to be performed along with the methods and criteria to be used in performing test activities. Describe the specific methods and procedures for each type of testing. Define the detailed criteria for evaluating the test results.)*

*(For each level of testing there should be a test plan and the appropriate set of deliverables. Identify the inputs required for each type of test. Specify the source of the input. Also, identify the outputs from each type of testing and specify the purpose and format for each test output. Specify the minimum degree of comprehensiveness desired. Identify the techniques that will be used to judge the comprehensiveness of the testing effort. Specify any additional completion criteria (e.g., error frequency). The techniques to be used to trace requirements should also be specified.)*

**5.1 Component Testing**

*(Testing conducted to verify the implementation of the design for one software element (e.g., unit, module) or a collection of software elements. Sometimes called unit testing. The purpose of component testing is to ensure that the program logic is complete and correct and ensuring that the component works as designed.)*

**5.2 Integration Testing**

*(Testing conducted in which software elements, hardware elements, or both are combined and tested until the entire system has been integrated. The purpose of integration testing is to ensure that design objectives are met and ensures that the software, as a complete entity, complies with operational requirements. Integration testing is also called System Testing.)*

**5.5 Interface Testing**

*(Testing done to ensure that the application operates efficiently and effectively outside the application boundary with all interface systems.)*

**5.9 Regression Testing**

*(Testing done to ensure that that applied changes to the application have not adversely affected previously tested functionality.)*

**6. Pass / Fail Criteria**

*(Specify the criteria to be used to determine whether each item has passed or failed testing.)*

**6.1 Suspension Criteria**

(*Specify the criteria used to suspend all or a portion of the testing activity on test items associated with the plan.)*

**6.2 Resumption Criteria**

*(Specify the conditions that need to be met to resume testing activities after suspension. Specify the test items that must be repeated when testing is resumed.)*

**6.3 Approval Criteria**

*(Specify the conditions that need to be met to approve test results. Define the formal testing approval process.)*

7. **Testing Process**

*(Identify the methods and criteria used in performing test activities. Define the specific methods and procedures for each type of test. Define the detailed criteria for evaluating test results.)*

**7.1 Test Deliverables**

*(Identify the deliverable documents from the test process. Test input and output data should be identified as deliverables. Testing report logs, test incident reports, test summary reports, and metrics' reports must be considered testing deliverables.)*

**7.2 Testing Tasks**

*(Identify the set of tasks necessary to prepare for and perform testing activities. Identify all intertask dependencies and any specific skills required.)*

**7.3 Responsibilities**

*(Identify the groups responsible for managing, designing, preparing, executing, witnessing, checking, and resolving test activities. These groups may include the developers, testers, operations staff, technical support staff, data administration staff, and the user staff.)*

**7.4 Resources**

*(Identify the resources allocated for the performance of testing tasks. Identify the organizational elements or individuals responsible for performing testing activities. Assign specific responsibilities. Specify resources by category. If automated tools are to be used in testing, specify the source of the tools, availability, and the usage requirements.)*

**7.5 Schedule**

*(Identify the high level schedule for each testing task. Establish specific milestones for initiating and completing each type of test activity, for the development of a comprehensive plan, for the receipt of each test input, and for the delivery of test output. Estimate the time required to do each test activity.)*

*(When planning and scheduling testing activities, it must be recognized that the testing process is iterative based on the testing task dependencies.)*

**8. Environmental Requirements**

(Specify both the necessary and desired properties of the test environment including the physical characteristics, communications, mode of usage, and testing supplies. Also provide the levels of security required to perform test activities. Identify special test tools needed and other testing needs (space, machine time, and stationary supplies. Identify the source of all needs that is not currently available to the test group.)

**8.1 Hardware**

*(Identify the computer hardware and network requirements needed to complete test activities.)*

**8.2 Software**

*(Identify the software requirements needed to complete testing activities.)*

**8.3 Security**

*(Identify the testing environment security and asset protection requirements.)*

**8.4 Tools**

*(Identify the special software tools, techniques, and methodologies employed in the testing efforts. The purpose and use of each tool shall be described. Plans for the acquisition, training, support, and qualification for each tool or technique.)*

**8.5 Publications**

*(Identify the documents and publications that are required to support testing activities.)*

**8.6 Risks and Assumptions**

*(Identify significant constraints on testing such as test item availability, test resource availability, and time constraints. Identify the risks and assumptions associated with testing tasks including schedule, resources, approach and documentation. Specify a contingency plan for each risk factor.)*

[*http://www.professionalqa.com/ieee-standard-829-1998*](http://www.professionalqa.com/ieee-standard-829-1998)