**Key activities mandatory for achieving automation:** -

1. Automation Feasibility Analysis
2. Identification of proper automation tools
3. Test data with expected result
4. Setting up test environment

**Note: - Automation can be done only on stable applications/products.**

**Automation Feasibility Analysis:** - Manual test cases are act as a base for automation. Here we decide which test cases should be automated and which should not be? This is called automation feasibility analysis.

1. Is this test scenario automable?
2. How important the test scenario is?
3. Action recommended i.e. Definitely/Should/Think Before Automation

**Automation Testing Life Cycle:** -

**Requirement Gathering and Automation Feasibility Analysis**

**Execution and Result Analysis**

**Scripting and Dry Run**

**Test Strategy and Design**

**Automation Life Cycle**

1. **Requirement Gathering and Automation Feasibility Analysis: -**
2. **Understand the project requirement**
3. **Baseline the requirement**
4. **Automation Feasibility Analysis (**as seen above**)**
5. **Appropriate test automation tool**

To finalize AFA we need to think on below factors also: -

1. **Usage of module**
2. **Object Identification**
3. **Scope for automation**
4. **Test Strategy and Design:** -
5. **Prepare strategy document**
6. **Identify most suitable test automation framework**
7. **Setting up test environment**

The automation framework combines coding standards, best practices, reporting mechanism. Due to this scripting will become more easy, efficient and less redundant.

1. **Scripting and Dry Run:** -
2. **Create test scripts and associate them into library**
3. **Associate test script with test data**
4. **Perform dry run**
5. **Prepare execution plan**
6. **Execution and Result Analysis:** -
7. **Execute scripts and verify result**
8. **Log the defect if necessary**
9. **Rerun the scripts after fixing the defect**
10. **Share results with necessary stakeholders**

**Advantages of Automation:** -

1. Very useful if set of test needs to executed repeatedly.
2. Cross browser testing is possible.
3. We can also run on different machine simultaneously.

**Disadvantages of Automation:** -

1. Initial cost of creating automation framework and scripts is high.
2. Licensed tools are very expensive although they provide good support.
3. Skilled testers are required and visual reference is not possible.