User Acceptance Testing - UAT

User Acceptance Testing - UAT is a type of testing performed by the Client to certify the system with respect to the requirements that were agreed upon. This testing happens in the final phase of testing before moving the software application to the Market or Production environment. Such type of testing is executed by the client in a separate environment (similar to the production environment) & confirm whether the system meets the requirements as per requirement specification or not. UAT is performed after System Testing is done and all or most of the major defects have been fixed.

Definition :

The ISTQB defines acceptance as: formal testing with respect to user needs, requirements, and business processes conducted to determine whether a system satisfies the acceptance criteria and to enable the user, customers or other authorized entity to determine whether or not to accept the system.


DEV
QA
UAT
PROD

User Acceptance Testing is also known as End-User Testing, Acceptance Testing and Operational Acceptance Testing (OAT). The Acceptance Testing is Black Box Testing, which means UAT users doesn’t aware of the internal structure of the code. They just specify the input to the system & check whether systems respond with the correct result.

Types of User Acceptance Testing

Alpha Testing : Alpha Testing is done onsite therefore developers, as well as business analysts, are involved with the testing team.

Beta Testing : Beta Testing is done at the client-side by the real users or customer, therefore developers and business analysts are not at all involved.

Who Performs UAT?

Client : UAT is performed by the customers of the organization. They are the ones who asked the organization to develop the software.

End Users : UAT is performed by the end-users of the software. They can be the customers themselves or the customers' customers.

Need of User Acceptance Testing:

*Acceptance testing is required because Developers make software which is their "**own**" understanding of the requirements and may not actually be what the client needs. Requirements changes during the course of the project may not be communicated effectively to the developers.*

Pre-requisites of User Acceptance Testing:

Business Requirements must be available
Application Code should be fully developed
Unit Testing, ***Integration Testing*** *& System Testing should be completed*
Regression Testing *should be completed with no major defects*
All the reported defects should be fixed and tested before UAT
Traceability matrix for all testing should be completed
UAT Environment must be ready

User Acceptance Testing Process:

Creation of UAT Plan:

UAT Design

UAT Test Execution

Confirm Business Objectives met:

Exit criteria for UAT:
Before moving into production, the following needs to be considered:

No critical defects open
Business process works satisfactorily
UAT Sign off meeting with all stakeholders

Entry criteria could be that the requirements are signed off, Test plan is signed off, test scenarios and test cases reviewed approved by key stakeholders etc. Exit criteria to move the product into release could be that 100% of all test cases have been executed, 100% of all critical and high defects have been fixed, 90% of all medium defects are fixed, 95% of all test cases have passed etc.

When you have Entry and Exit Criteria defined on your UAT test plan and agreed by all key stakeholders (including your engineers), you then have a clear path to define progress of Testing when you're in full swing. And there will be no surprises.

Entry criteria is a set of conditions or requirements, which are required to be fulfilled or achieved to create a suitable & favorable condition for testing. Finalized & decided upon after a thorough analysis of software & business requirements, entry criteria ensures the accuracy of the testing process and neglecting it can impact its quality. Some of the entry criteria, which are generally used to mark the beginning of the testing, are:

Complete or partially testable code is available.
Requirements are defined and approved.
Availability of sufficient and desired test data.
Test cases are developed and ready.
Test environment has been set-up and all other necessary resources such as tools and devices are available.

Exit criteria highly depends on the by-product of the software testing phase i.e. test plan, test strategy, test cases, test logs, etc. and can be defined for each test level, right from test planning, specification, and till execution. The commonly considered exit criteria for terminating or concluding the process of testing are:

Deadlines meet or budget depleted.
Execution of all test cases.
Desired and sufficient coverage of the requirements and functionalities under the test.
All the identified defects are corrected and closed.
No high priority or severity or critical bug has been left out.

https://onix-systems.com/blog/elements-of-effective-end-user-testing-of-your-mobile-app-design

https://usabilitygeek.com/usability-testing-mobile-applications/