

Assignment 2 – Research Questions

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SCENARIO 1

ASSUMPTIONS:

Assuming that a Swedish research centre wishes me as a researcher and wants to develop the latest software testing approaches, tools, measures, and principles that carry out the testing activities in Swedish organizations. And also wants to know if existing ones already in place meet these objectives and what improvements can be made.

RESEARCH QUESTIONS:

1. Which software testing techniques are most common in Swedish software organizations?
2. Which tools do Swedish organizations use for software testing?

RESEARCH METHODOLOGY:

The most important and relevant method is to conduct research using surveys (questionnaires) to acquire information on software testing techniques and tools. This research survey is conducted in a way by asking questions in a number of forms based on the study's target audience and objectives. Before we begin planning research, we must determine the objective of why we are doing it so that the study may be organized, intended, and implemented properly. The results of the survey method are drawn from the feedback provided by the audience. The questionnaire includes several questions on testing, tools used, metrics and standards of different organizations.

JUSTIFICATION:

We need to collect some important data from various organizations in order to acquire an insight into the testing methods utilized by Swedish organizations. To collect the data, we propose designing a questionnaire. As a result, firms receive more knowledge and ideas regarding improved testing methods, tools, and so on than they were previously exposed to. Furthermore, we may learn about certain parts of software testing that might be enhanced by implementing specific techniques from this study research. Several assumptions may be made regarding software testing, as well as some important discoveries that could benefit future studies on the issue.

Assignment 2 – Research Questions

SCENARIO 2

ASSUMPTIONS:

The assumption from the given scenario is that we can consider two different types of contexts one is a small scaled company, kind of a start-up company and other is the big or a well-established company.

RESEARCH QUESTIONS:

1. What are the important factors that affect the organizational contexts in implementing these new release methods?
2. Why it is tough in implementing these modern release practices?
3. What can be the possible outcomes after implementing these new release methods?

RESEARCH METHODOLOGY:

Initially it is important to know some details about the current release practices used by the company. So, Case study can be considered as the better research method. According to this we need to interview the employees working in these two different types of companies. It helps in extracting the characteristics and gaining an insight of the current release practices implemented by these companies. The active responses from the people can be used in analysing and generating a hypothesis.

JUSTIFICATION:

The main reason for considering the Case Study is that we can get the most appropriate answers from the people working for these organizations. Moreover, this method helps in answering the research questions to great extent.

SCENARIO 3

ASSUMPTIONS:

For scenario 3, we assume that all of the candidates are familiar with the TDD process and that the company has all of the candidates' contact information and resumes who are appearing for the interview.

RESEARCH QUESTIONS:

RQ1: How does the experience of the person in TDD process show the impact on the recruitment?

RESEARCH METHODOLOGY: The Experimentation method can answer the research question. To answer the research question, the quasi-experiment technique is used. In this technique, some tasks were designed using the TDD method and assigned to both categories

Assignment 2 – Research Questions

of candidates (experienced and non-experienced). Candidates were allowed to write their solutions, which were then reviewed by company experts. Each correct approach was assigned a score, and at the end of the task, all of the scores were added up to determine the best candidate.

JUSTIFICATION:

RQ1: Quasi-experimentation methods aid in analysing the individual's solutions to each problem, and the score also aids in determining how experience impacts the individual. As a result of the experimentation, the research question is justified and answered.

SCENARIO 4

ASSUMPTIONS:

The above scenario is assumed where large organizations maintain a team to track the performance of newly hired employees by looking into performance trends and the onboarding technique used to hire them.

RESEARCH QUESTIONS:

1. Which On Boarding strategies is used by the organization to train the newcomers?
2. How do large organizations assess the performance evolution of the newcomers based on the type of boarding strategy followed?

RESEARCH METHODOLOGY:

According to the present scenarios it is necessary to gain concrete, in depth knowledge about a specific subject. The case study is an appropriate option for answering the research questions. We can compare the performance of newly onboarded developers to that of experienced developers using a case study technique. To fulfil the organization's demands and update them with current workflow procedures, we must draw conclusions from the experienced developers' training period so that a similar technique may be utilized to train the onboarding developers. A case study is a qualitative tool for analysing in depth knowledge of a specific research subject and is used to evaluate the long-term performance of a developers by illuminating different aspects of a research problem.

JUSTIFICATION:

A case study is a comprehensive examination of a single issue that is useful for explaining, comparing, and comprehending various facets of a research problem. The chosen case study is a good fit for the research objectives since it clearly provides the performance evolution of onboarding developers by comparing it with the experienced developers.