**Student Name and ID Date**

**Test Overlay in Software Development& Authors**

1. **Specific Area /Sub-area of the paper**

Area- Software and System Testing; Sub-Area: Test Overlay

1. **Problem(s) specifically addressed by the paper / Research Questions**

The research problem being addressed in this paper is based on exploratory approaches of text overlay that revolves around variability intensive context. The research addresses various aspects of test activities, which include units’ tests, integration tests, and systems tests with reference to variations in time and evolution in time. The author proposes and focus on underlying assumptions of different testing regressions techniques available in the literature.

The defined research questions by the author include:

RQ1) What amount of testing in a variability intensive is overlaid and the one that is redundant?

RQ2) How does overlaid testing occur?

RQ3) What extent of overlaid testing is redundant?

1. **Approach, Techniques, Models, Methodology used to tackle the problem(s)**

The authors performed testing in Android embedded devices through in-depth analysis. The technique applied in testing is geared towards applying methodological and technical benefits on systematic reuse. Systematic literature review on regression test selection technique was adopted to assess and test the test cases seeming to trigger failures, helpful in detecting faults as per the available information. The technique used in tackling the highlighted problem looked at the potential side effects, assuming the validity on the reusability of the previous tests results.

1. **Results Obtained / Evaluation**

In ***RQ1***, the authors through exploratory case studies in the variability intensive context, found that software product line to be incrementally evolving The results obtained by the authors by the included large extent of test overlay noted to have originated from distributed tests, poor documentations, test cases structure, substandard data analysis.

In ***RQ2*** regarding how test overlay occurs, the authors found that it occurs through assessing the level of test overlay conducted depending on the level of abstraction studied. Additionally, the authors obtained results by assessing qualitative analysis criteria, which found various types of test overlay inspired by Huberman’s and Miles graph models.

In ***RQ3*** regarding the extent of test overlay that is redundant, the authors found that overlay is caused redundancy in the requirements, which is based on the issue of quality requirements. Other causes found include adoption of features tests suite, systems testing within the generic areas, and finally is issue of static tests suite.

1. **Strengths of the Paper**

* The research topic is ideal as it provides more insights relating to tests overlay in software development and other areas.
* The research undertaken is applicable in real life projects, especially in systems development

1. **Weaknesses of the Paper**

* In this research project, the authors have not provided how decreasing level of abstraction in support the hypothesis. Similarly, authors have not pointed clearly about the proposition on the poor documentation.
* This research by the two authors, even though even though the topic is all about test overlays, the topic does not provide detailed information about types of testing such as integration testing, integration testing and systems testing.

1. **Potential Improvements / Extensions**

* The research by the 2 authors regarding test overlay in software is not much detailed, and it requires further refinement in areas such as testing strategies.
* The authors have highlighted various aspects of test activities, which include quality requirements, functional requirements. This research require refinement in such areas such adoption systematic literature review on methodology and techniques adopted while undertaking this research.

1. **Other Comments (if any)**

-The research questions are clear and are helpful in defining and analyzing the problem in this research.