SE 216 – SOFTWARE PROJECT MANAGEMENT
SOFTWARE MEASUREMENTS DOCUMENT

PROJECT NAME: LIKE

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Questions to identify measurements:

1. **How much progress has been made in the project plan for each sprint, are the sprints being completed within the scheduled time?**
2. **What percentage of code was reused from earlier projects or libraries?**
3. **How many changes did we make during each sprint?**
4. **How much has the recommendation engine development progressed?**
5. **What is the status of the development of LIKE's features (UI, cross-recommendation algorithms, notification system, feedback system)?**
6. **Is a prototype created, and if so, does it fit the requirements?**
7. **How much time was spent testing, and were any defects identified during prototype testing?**

Identified measurements:

1. **Scrum Sprint Progress:**
   Percentage of the completed sprint backlog items and general project progress made in each sprint, percentage of sprint goals achieved within the planned duration.
2. **Code Reuse:**
   Percentage of lines of code reused from previous projects or libraries.
3. **Number of Changes:**
   Number of changes made to the code during each sprint.
4. **Recommendation Engine Progress:**
   Percentage of accuracy in recommendations made, and any adjustments made based on feedback in the testing stage.
5. **Feature Development Progress:**
   Measured by the number of features developed, percentage of features completed within the sprint.
6. **Prototype Progress:**
   Measured by the completion of the key features, alignment with the initial project goals and feedback from the stakeholders after usability testing.
7. **Testing:**
   Testing will include both functional and non-functional testing to make sure the prototype operates as planned and meets the requirements.

Measurement storage and collection:

Throughout our project's lifecycle, these metrics will be tracked and stored. Scrum sprint progress, completion status will be documented in a project management tool (e.g. Gantt Chart), with regular updates from team members.
Code reuse metrics will be maintained in a version control system (e.g. Github), with developers tracking and updating reused code. Changes to the code will be logged in the version control system to monitor code evolution.

Progress of the recommendation engine and feature development will be documented in project reports, with testing results tracked using test management tools. Prototype progress and stakeholder feedback from usability testing will also be analysed for evaluation. Defects identified during testing will be logged and followed by the development team members. Centralised storage of this data will be used in analysis and decision-making throughout the project.

Measurement Type	Description	Example Measurements
Sprint Progress	The progress of sprint backlog items and overall project progress within each sprint.	Percentage of completed sprint backlog items: 80% (out of 20 user stories, 16 completed) Percentage of sprint goals achieved within planned duration: 100% (UI completed within two weeks)
Code Reuse	The percentage of lines of code reused from previous projects or libraries.	Percentage of lines of code reused: 50% (500 lines reused out of 1000 total lines)
Number of Changes	The number of changes made to the code during each sprint.	Total number of changes made: 30 (15 bug fixes, 10 feature additions, 5 performance related changes)
Engine Development Progress	The progress of the recommendation engine development, including the accuracy of recommendations and adjustments based on feedback.	Percentage of accuracy in recommendations: 80% (correct prediction for 80 out of 100 test cases)
Feature Development Progress	The progress of feature development, indicating the completion status of each feature within the sprint.	Number of features developed: 3 out of 5 planned features completed. Percentage of features completed within the sprint: 80% (8 out of 10 features completed)
Prototype Progress	The progress of the prototype development, alignment with project goals and stakeholder feedback.	Completion of key features: User registration, search functionality implemented. Stakeholder feedback from usability testing: Positive feedback on usability, suggestions for improving search features.
Testing	The testing efforts, including functional and non-functional testing	Number of test cases executed: 50 Percentage of test coverage: 90% (test covers 90% of the code) Identification and resolution of defects: 7 defects identified and resolved (minor UI glitches)