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February 5<sup>th</sup>, 2021

## **An Easy Approach to Requirements Definition** **(Caliper App)**

Below here will a list of **20 functional system requirements** for the Caliper App. This list 20 functional requirements will follow the guidelines of the Easy Approach to Requirements Syntax (EARS) to write the requirements:

1. The caliper app shall give the user different type of scenarios that reflect real-life situation where the user needs to put in the skill of using the caliper into these scenario to test their ability of understanding on how to use a caliper.
2. When user enter the scenario simulation, the caliper app shall give a tutorial step-by-step on how to use the caliper before putting the user into the simulation.
3. While user is currently in the simulation scenario, the caliper app shall monitor the user's performance on how well they operate on the tool during the simulation.
4. If the simulation crash in the middle of the usage of the app, then the caliper app shall display a message to user saying that something went wrong and will start to reboot after 3 seconds.
5. When user import the CAD data or the metadata from external sources, the caliper app shall import the data and display the data inside that file that was imported into the app.
6. If the file import was corrupt or could not be open, then the caliper app shall display an error message that it could not process the file and ask user to try again.
7. While assembling the CNC drill, the caliper app shall measure and record the user's ability of assembling the drill and using that score to determine if it was assemble correctly.
8. When the user clicks the app icon to enter the app, the caliper app shall display different type of scenarios for user to choose.
9. Where the save/load is available, the caliper app shall let user save/load their scenario based on where they left off when they save it or load it the next time the app is being use.

10. If the app shut down from a low power source, then the caliper app shall display a message if there was an abrupt interruption in the program due to something happen to the program.

11. If the app cannot measure the performance of the user, then the caliper app shall give warning to the user saying that the recording of performance on the caliper cannot be determine now, your score might be inaccurate.

12. Where the review function is available to the user, the caliper app shall give the user a way to access other users' review on the caliper experience they had while using the app.

13. When the user finish with one of the scenarios in the app, the caliper shall give the user option if they want to rate their experience with the scenario they just did.

14. When the user finishes all the scenarios that the caliper app provides for them, the caliper app shall ask the user if they are ready to use their skill to assemble a CNC drill yet.

15. Where the feature letting user to choose the difficulty of each scenario, the caliper app shall change the experience to match with the user choice on the difficulty level.

16. If the caliper app has no internet connection while using the app, then the caliper app will display no internet connection and the app cannot be use until it is reconnected to the internet.

17. While the user has not finished all the scenarios, the caliper app shall ask user if they want to continue to the next scenario or restart the scenario that they just did for a retry.

18. While during the training tutorial video on how to use the caliper, the caliper app shall display fun fact about the caliper matching the timestamp of the tutorial video.

19. When importing the CAD data or other data from external source, the caliper app shall ask user if they want to upload more data or one file should be good enough to import.

20. Where the availability to update the app with new scenario, the caliper app shall automatically download the newest version firmware and give the app and up-to-date message once it finished installing.