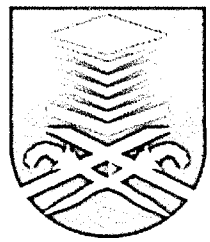

# IMPLEMENTATION OF COMPUTER SIMULATION TOOLS FOR PROCESS AND LAYOUT PLANNING

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"I declare that this thesis is result of my own work expect the ideas and summaries which I have clarified their sources. This thesis has not been accepted for any degree and is not concurrently submitted in candidature of any degree"

Signed : .....

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## ABSTRACT

For few decades, Information Technology (ICT) had merged into the manufacturing virtual reality software development technology. The virtual reality manufacturing software solution had becoming important tools in manufacturing production system layout, datasheet, designing, simulation and others. The software development has simplified, facilitated and eased human being in the manual job. This final year project intends to use DELMIA Process Planning (DPE) software Version D5 Release 19 (VD5R19) solution for pre-process planning and resource simulation tools and DELMIA QUEST simulation Version D5 Release 19 (VD5R19) for the three dimensions (3D) factory layout simulation method. Investigation was conducted using actual data collected from Autokeen Sdn Bhd manufacturing production plant, vendor for PROTON and PERODUA by focusing on the welding department production line. By using the data collected from the industry, the production line in welding department has been simulated using QUEST and DELMIA Process Engineer in term of the production line layout and pre-planning process. The implementation for both softwares was used to generate possible improvement to the current actual production process at Autokeen Sdn Bhd manufacturing plant. The simulation results for the both softwares solution had been analyzed and compared accordingly to the actual production process result which had lead to some discussions and recommendations.

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