**LAMPIRAN J**

POLITEKNIK MALAYSIA

## BORANG INVENTORI PROJEK PELAJAR

| PERKARA | MAKLUMAT<br>*INFORMATION* |
|---|---|
| Program<br>*Program* | DTK |
| Jabatan<br>*Department* | KEJURUTERAAN ELEKTRIK |
| Semester/ Tahun<br>*Semester/ Year* | LIMA |
| Tajuk Projek<br>*Project Title* | SMART POWER OUTLET USING ESP32 |
| Jenis Projek<br>*Type of Project* | INOVASI |
| Kategori Kluster Penyelidikan<br>*Category/ research Cluster* | TEKNOLOGI DAN KEJURUTERAAN |
| Ahli Kumpulan<br>*Group member* | 1. AIZAT ZUHAIR BIN ZAKARIA<br>991202-04-5013<br>2. MUHAMMAD ASHRAFF BIN HASHIM<br>991121-10-5221<br>3.<br>4.<br>5. |
| Penyelia<br>*Supervisor* | DR ASPALILLA BINTI MAIN<br>790312-01-5228 |
| Penyelia Bersama<br>*Co-Supervisor* | |
| Abstrak<br>*Abstract* | Smart Power Outlet (SPO) is a webserver based wireless power outlet that uses Android application for the user interface, enabling users to control physical devices on their smart phone. SPO uses 802.11 b/g/n in controlling the power outlet. SPO is developed as a low cost alternative in Internet Of Things technology. The aim of this project is to design a mobile apps interface to remotely switch on and off power outlet in facilitating user monitoring their power outlet, which will encourage more people to install smart power outlet technology in their home. SPO has achieved success in implementing core features such as plug and play coordinator setup, monitor temperature, on and off switch, RGB colour control extension to an Android Smartphone devices. Also, |

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| | SOP control interface is optimized for touch input. This is possible with the use of Android application (SOP) which is a web based multimedia platform. One of the major challenges in this project is how to send data over COM port using Android application, as it does not natively support such feature. Also, setting up a secure connection between coordinator and end devices is another challenge that has been solved in SOP. In short, SOP is successful and have achieved the aim and objectives. Improvement has to be made to the overall stability of SOP and integration of SOP and commercial products could be further investigated. Also, SOP could expand to control all power outlet in one house from power monitoring to security in the future. |
| Keyword<br>*Keyword*<br>(max 5 word) | SMART POWER OUTLET |
| Objektif Projek<br>*Project Objectives* | -To develop simple power outlet that can power off using timer to prevent power from overload.<br>-To design a mobile apps interface to remotely switch on and off power outlet in facilitating user monitoring their power outlet.<br>-To evaluate the temperature of power outlet by using smart power outlet. |
| Skop Projek<br>*Project scope* | -The power outlet can plug for two device in at a time<br>-It only can use 3 pin power outlet for the safety<br>-It design just for indoor use only |

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| IP No | |
| Dapatan<br>*Finding*<br>(*500 words max*) | Research, article, internet |
| Cadangan untuk kerja-kerja akan datang<br>*Suggestion for future work*<br>(*500words*) | The first step to develop smart house |
| Gambar berkaitan projek<br><br>*Picture related to project* (700kb) |   |

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| Rating/Level | JABATAN | |

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*Borang ini perlu diisi oleh pelajar dan dihantar kepada penyelia/ penyelaras projek dalam bentuk hardcopy dan softcopy (borang LAMPIRAN J) dan gambar hasil projek dalam format jpeg/bitmap) bersama laporan akhir dan hasil projek.*