



## BORANG INVENTORI PROJEK PELAJAR

| PERKARA                                                            | MAKLUMAT<br>INFORMATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| Program<br><i>Program</i>                                          | DTK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Jabatan<br><i>Department</i>                                       | KEJURUTERAAN ELEKTRIK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Semester/ Tahun<br><i>Semester/ Year</i>                           | LIMA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Tajuk Projek<br><i>Project Title</i>                               | SMART CONTROL WHEELCHAIR USING ESP32 VIA BLYNK APPLICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Jenis Projek<br><i>Type of Project</i>                             | INOVASI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Kategori Kluster Penyelidikan<br><i>Category/ research Cluster</i> | TEKNOLOGI DAN KEJURUTERAAN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Ahli Kumpulan<br><i>Group member</i>                               | 1. MUHAMMAD HASYIMI BIN SHAH ADNAN<br>990221-04-5647<br>2. MUHAMMAD NAJIB BIN BUANG<br>990526-01-7313<br>3.<br>4.<br>5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Penyelia<br><i>Supervisor</i>                                      | ZAHRIM BIN ABDUL RAHMAN<br>680101-01-8587                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Penyelia Bersama<br><i>Co-Supervisor</i>                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Abstrak<br><i>Abstract</i>                                         | <p>This project is related to the android-based wheelchair controller. The system is designed to control a wheelchair using the android device. The objective of this project is to facilitate the movement of people who are disabling or handicapped and elderly people who are not able to move well. The result of this design will allow certain people to live a life with less dependence on others. Android technology is a key which may provide a new way of human interaction with machines or tools. Thus the problem that they are facing can be solved by using android technology to move the wheelchair. This can be achieved with used the Bluetooth as an intermediary. In this project, interface is designed therefore to develop the program for installing to the android device that will controls the</p> |

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|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------|-------|----------|--------------------|----------|------------------|----------|-------------------|----------|
|                                                       | <p>movement of wheelchairs. This project uses esp32 board and direct current motor to create the movement of wheelchair. The results and analysis of this innovation will describe in this report. The results of this project show that this project can be used for future research works and to design excellence innovation that meet the market needs and public interest.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     |          |       |          |                    |          |                  |          |                   |          |
| <p>Keyword<br/> <i>Keyword</i><br/> (max 5 word)</p>  | <p>SMART WHEELCHAIR</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                     |          |       |          |                    |          |                  |          |                   |          |
| <p>Objektif Projek<br/> <i>Project Objectives</i></p> | <ul style="list-style-type: none"> <li>-To give the user full control of wheelchair using smartphone.</li> <li>-To let another people to control the user's wheelchair especially for user's family.</li> <li>-To facilitates the movement of user without asking for others to help.</li> <li>-To reducing the user's energy burden to control wheelchairs.</li> <li>-To move the wheelchair at the 4 direction which is forward, reverse, left and right.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                  |                     |          |       |          |                    |          |                  |          |                   |          |
| <p>Skop Projek<br/> <i>Project scope</i></p>          | <ul style="list-style-type: none"> <li>-This project are created especially for patient who don't have enough strength to move the manual wheelchair.</li> <li>-This project also created for another person who close to patient such as their family or nurse.</li> <li>-This project are focus on motor to control the movement of wheelchair.</li> <li>-This project will use ESP 32 connect with other component and control the motor by using blynk application.</li> </ul> <p>To make it happen, We will use :</p> <table border="0"> <tr> <td>2 scooter DC motors</td> <td>(2 unit)</td> </tr> <tr> <td>Esp32</td> <td>(1 unit)</td> </tr> <tr> <td>10Amp motor driver</td> <td>(2 unit)</td> </tr> <tr> <td>12v power supply</td> <td>(2 unit)</td> </tr> <tr> <td>Casual wheelchair</td> <td>(1 unit)</td> </tr> </table> <p>Arduino ide<br/> Blynk apps</p> | 2 scooter DC motors | (2 unit) | Esp32 | (1 unit) | 10Amp motor driver | (2 unit) | 12v power supply | (2 unit) | Casual wheelchair | (1 unit) |
| 2 scooter DC motors                                   | (2 unit)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |          |       |          |                    |          |                  |          |                   |          |
| Esp32                                                 | (1 unit)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |          |       |          |                    |          |                  |          |                   |          |
| 10Amp motor driver                                    | (2 unit)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |          |       |          |                    |          |                  |          |                   |          |
| 12v power supply                                      | (2 unit)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |          |       |          |                    |          |                  |          |                   |          |
| Casual wheelchair                                     | (1 unit)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |          |       |          |                    |          |                  |          |                   |          |

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| IP No                                                                                               |                                                                                                                                                                                                                                                                                                                                |                                                                                     |
| Dapatan<br><i>Finding</i><br>(500 words max)                                                        | Projek ini dapat dilaksanakan dgn jayanya dgn kawalan penuh dri telefon bimbit yang mengawal kerusi roda yang mempunyai 4 arah iaitu depan,belakang,kiri dan kanan.Kami mendapat idea untuk melaksanakan projek ini kerana ramai pesakit yg inginkan privacy dan kebebasan untuk bergerak walaupun mereka lumbuh separuh badan |                                                                                     |
| Cadangan untuk<br>kerja-kerja akan<br>datang<br><i>Suggestion for<br/>future work</i><br>(500words) | Kami mencadangkan projek ini dpt diaplikasikan pada pesakit yang memerlukan.Projek ini juga boleh ditambahbaik lgi dgn menggunakan satu motor dan penambahan gear pada roda dan dc motor.Selain itu,drpd reka bentuk yg sedia ada boleh dinaiktarafkan.                                                                        |                                                                                     |
| Gambar berkaitan<br>projek<br><br><i>Picture related to<br/>project</i> (700kb)                     |                                                                                                                                                                                                                                              |  |
| 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.

