**GROUP 61 PROJECT PROPOSAL**

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| **PROJECT TITLE** | **ASAP-Caller** | | | |
| **Group Members** | **Name** | **NSBM ID** | **PLY ID** | **Group Position** |
| **R.M.R.M.L.Rathnayaka**  R.M.H.C. Rathnayake  R.M.L.P.Sandaruwan  R.B.I.K.Subasingha  Y.M.S.K.Y.Bandara | **19365**  19412  19491  19270  19369 | **10747919**  10747887  10747909  10747883  10749057 | **Programming Leader (GL)**  Technical leader  Testing and Maintenance Leader  Planning leader  Quality Leader |

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| **PROJECT DESCRIPTION** |
| When it comes to these days, we heard several Accidents in one day. From Those Accidents, 90% of Accidents are vehicle accidents. Present-day with improvements in technology there are so many options in a vehicle to avoid an accident before it happened. But we all know there is no change when it comes to the number of accidents. In this project, we focused not on avoiding accidents, we focused on what happened after someone faced an accident. When it comes to this kind of incident, the process begins few seconds after the accident according to the driver’s and passengers’ damages, that can be serious and may be unconscious. If that happened, they can’t inform a hospital or any emergency services. This situation may end a life. When it comes to this project, we focused on a solution for this kind of accident. |

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| **PURPOSE / GOALS** |
| The purpose of this project is to save the lives that lose due to vehicle accidents. This product works as a beacon, if some accident happens this device direct call to emergency line (ex: 119). We are going to develop a black box that direct calls or messages to emergency-line  If driver or any passenger didn’t confirm the trigger. Trigger activates after a huge shock or vehicle flip. |
| **ASSUMPTIONS** |
| As our assumption vehicle would make a huge shock after an accident or lean over 350(degrees of angle) to any side. We assume that driver can reach his/her mobile phone if alarm is false |
| **APPROACH** |
| We are going to use Raspberry Pi microcomputer, XYZ Axis Accelerometer to sense the angle of the vehicle and Shock & Vibration Sensors to sense Shock |
| **RISK FACTORS** |
| All above sensors are hardware devices, if one sensor broke this system will not work for certain accidents. If vehicle loose power due to something and owner didn’t notice that inbuilt battery could be dead in few hours (For this we are going to research to implement this system on a Arduino to minimize the power consumption and cost) |

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| **TIMELINE / MILESTONES** | | | | |
| Develop a physical prototype according to our assumptions (Hardware) | | | | |
| Develop a code prototype according to our assumptions (Software) | | | | |
| Develop a solid software | | | | |
| Change hardware according to software optimally | | | | |
| Reinforce the hardware | | | | |
| Make a waterproof and rugged case for the Hardware | | | | |
| Researching about mount | | | | |
| Testing on a prototype model (can’t do an actual testing due to cost) | | | | |
| Implement finished product to a real vehicle | | | | |
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| **PROJECT COST AND RESOURCE ESTIMATE** | | | | |
| **OVERVIEW** | Because of the hardware needs and some physical objects, we need invest to some resources. | | | |
| **NEEDS / INVESTMENT** | | | | **COST** |
| RaspberryPi | | | | Rs.10000 |
| Other Hardware | | | | Rs.3000 |
| Mount | | | | Rs.500 |
| Software | | | | - |
| Case | | | | Rs.2000 |
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| **Total** | | | | Rs.15500 |

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