EMSS Week 3

functional requirements

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| --- | --- |
| ID | UC001 |
| Name | Day Time Power Supply |
| Actors | Solar Energy Provider |
| Description | 1. Solar Energy Provider system notifies EMSS about the availability of solar power 2. EMSS checks the total present power usage of the house 3. EMSS switches the power supply from Power Grid to Solar Power 4. EMSS verifies the level of the battery 5. EMSS charges the battery |
| Data | Battery Level, Current Power Usage |
| Stimulus | Sunlight |
| Response | Notifies the user about the switch |
| Comment | User must have enabled the automatic power supply switch mode. |

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| --- | --- |
| ID | UC002 |
| Name | Sell Excess Power |
| Actors | Electricity Provider, User |
| Description | 1. User provides login information for the Electricity provider to the application  2. User links the EMSS application with the Electricity Provider account  3. User accepts the terms and conditions  4. EMSS validates the excess solar power and battery level of 80%  5. EMSS routes the solar power to power grid |
| Data | Electricity Provider DB, Battery Level, |
| Stimulus | Excess Power Supply and Battery Level is 80% |
| Response | Provide user with earnings record |
| Comment |  |

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| --- | --- |
| ID | UC003 |
| Name | Night Time Power Supply |
| Actors | Solar Energy Provider, User |
| Description | 1. Solar Energy Provider notifies the EMSS about the unavailability of sunlight  2. EMSS provides user with an estimated up-time on stored power  3. The user activates sleep mode while going to sleep  4. EMSS turns off the user specified appliances |
| Data | Battery level |
| Stimulus | Unavailability of sunlight |
| Response | Notifies the user about the switch |
| Comment | User should specify the devices to be turned off at sleep mode |

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| --- | --- |
| ID | UC004 |
| Name | User Not at Home |
| Actors | User |
| Description | 1. The user sets status in application to – not at home  2. EMSS puts the devices on Standby  3. EMSS turns off the lights  4. EMSS locks the door  5. EMSS charges the battery  6. EMSS sends excess power to power grid |
| Data | Devices DB |
| Stimulus |  |
| Response | EMSS sends confirmation message to user |
| Comment |  |

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| --- | --- |
| ID | UC005 |
| Name | Check the usage report |
| Actors | User, Electricity Provider, Solar Energy Provider |
| Description | 1. User logs in  2. User clicks on the option to generate report  3. EMSS fetches data from Solar Energy Provider  4. EMSS fetches data from Electricity Provider  5. EMSS calculates the total usage and costs  6. User downloads the generated report |
| Data | Electricity Provider DB, Solar Energy Provider |
| Stimulus |  |
| Response | EMSS generates the requested report |
| Comment | User must have linked the Electricity provider account, Solar Power Provider with EMSS |