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Learning Report – MULTIPURPOSE SMART BAND

Course Code: <CODE>



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**Document History**

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# Activity 3

1.1 Requirements

* + 1. Aging and Cost Gradation

**Aging**

* **1526** – Ancient earlier portable watches were invented and manufactured by British govt. accuracy could mean off by more than half an hour per day, and most didn’t even have a minute hand.
* **1720** – First accurate pocket watch. The balance wheel and modern escapement finally made timepieces useful for science and navigation.
* **1910** – pocket watches move to be wrist watches. During World War I soldiers began to modify pocket watches with straps – and soon after the men’s wristwatch was really born.
* **1926** - Wristwatches become water and dust resistant.
* **1960** - Electronic watches were born. The first electronic watches used “humming” tuning forks powered by a battery.
* **1970** - Quartz watches enable cheap, ultra-accurate timekeeping. The landed Swiss watchmaking elite were divided on the electronic revolution’s place in the future of watchmaking – which ended up being a disruptive force that almost toppled the mechanical watch industry.
* **1980** - Computers and clocks Combine: The Calculator Watch was born. The size was huge with inaccuracy.
* **1990** - The connected watch is born, later dies: The SPOT watch. Popular culture has imagined intelligent, connected devices worn on the wrist since the early 20th century, but it was not until the mobile phone era, when connected watches that offered useful information were available. Using radio signals, the original SPOT watches could offer things like news, weather, stock prices and sports scores for a modest subscription price.
* **2010** - The connected watch was reborn. It had the functionality of connecting it to your smart phones. The batter backup was a major issue. It showed a hybrid functionality of messages, playing music, camera, and other screen evolution technologies were supported.

**Cost Gradation**

Cost=500-30000

Cost=300-10000

Cost = 90-500

Cost=150-5000

* + 1. Problem Statement
* To develop an enhanced model of smart band which will perform multipurpose functions.
* The main aim of this model is to have access to perform all mathematical, logical, and arithmetic operations by building a handy portable band.
* It serves multiple ways of carrying. Can be used as a watch, or a miniature pod and can be used to stick on walls, boards or notebooks.
* It also has a feature of a projector for keypad which helps in flexible input entry.

1.1.3 Requirements

High End Requirements

|  |  |
| --- | --- |
| **ID** | **Description** |
| HL\_01 | Display screen with a portable screen width |
| HL\_02 | Straps for wrist band operation or when operated as a stick device the necessary casing and stand |
| HL\_03 | Pico projector along with proximity sensor for projecting |
| HL\_04 | Wifi module for Connection to cloud to store history of calculations |
| HL\_05 | Memory card + ROM with a micro USB port |

Low End Requirements

|  |  |
| --- | --- |
| **ID** | **Description** |
| LL\_01 | Processor to perform all mathematical operations and interconnecting with other modules. Embeds the software onto this hardware module |
| LL\_02 | Battery for power supply along with chargeable ports |
| LL\_03 | Vibrator which notifies the band while giving the result or when any misuse function happens it sends an alert signal |
| LL\_04 | The number of operands for performing any calculation is restricted to 3 operators. |
| LL\_05 | Only integer values can be entered for calculating any operation. |
| LL\_06 | The chargeable time for the band is 20mins with a battery backup of 3-4 days |