./

Learning Report – Applied System Development Life Cycle and Software Testing



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**Activity 1**

**To Design a Calculator using C programming**

**Requirements**

**State of Art**

In order to meet the requirement of today’s world, man has to be very fast. To do so, it is very genuine to face difficulties to meet some basic essentials. So we did some brain storming to search for them. The Research has been divided on the basis of cost and features of different calculators. The price ranges from Rs 100-300 which can be used by students in school & in universities, scientist and scholars. This device includes a large range of features at lower cost. The features include basic arithmetic operations, BMI calculation,conversion of Numeric into binary, octal,hexa decimal and vice versa. It can also perform basic trigonometry calculations.It includes nth root and power of n calculating features. Another category includes Body mass index(BMI) feature , calculation of trigonometric functions including exponential, logarithms and number conversion. The features can be enhanced further but at the cost will increase accordingly. At a range of Rs 600-650, complex calculations and imaginary numbers can be included. Calculators having medium costs are having medium set of features which includes matrix and calculus. Higher features at medium cost of price includes binary conversions and are foldables. Calculators of higher prices includes the functions of database management, higher accuracy,wider display for plots and graphs. It also includes smart touch, solar cell operations, battery charging and a waterproof.

**Cost and Features:**

The whole document has been divided on the basis of cost and features of different calculators. Following is a list of features based on different cost and prices of calculators.

1. Low cost and low featured Calculator: These types of calculators ranges from Rs. 50-200. It will be able to calculate basic arithmetic operations and are mobile.
2. Low cost and Medium featured: Such calculators ranges from Rs. 100-300 which will be able to perform arithmetic calculations including fractions, nth root and power of n.
3. Low cost and high featured: It includes operation of trigonometry, logarithm, exponential, inversion and degrees. These calculators ranges from Rs. 250-500.
4. Medium Cost and Low featured: It ranges from Rs. 500-650 with features of solving complex calculations , imaginary number and is having a larger display.
5. Medium cost and medium featured : It ranges from Rs. 750-1500 including matrix operation, calculus and statistics.
6. Medium cost and high featured : These types of calculators ranges from Rs 1200-2500. These are able to perform number calculations and are foldable.
7. High cost and medium featured : Such calculators ranges from Rs. 5000-10000.