



**School of Computing, UUM College of Arts and
Sciences**

UNIVERSITI UTARA MALAYSIA

STIA1123 PROGRAMMING 2

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Assignment 1

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Title : Watch

Type of watch :

- Analog watch
- Digital watch
- Smartwatch

Basic features of Watch :

- I. Display Time
- II. Display date
- III. Display day
- IV. Waterproof
- V. Use batteries

Features of Analog watch :

- I. displays the time through hands on a dial and the 12-hour format
- II. display date and day
- III. Weak Waterproof
- IV. Battery's life long-lasting
- V. consists of a mechanism that creates the "ticking" motion
- VI. moves the seconds, hours, and minutes hands simultaneously.

Features of Digital watch :

- I. displays time in the form of digits and numbers usually on an LED screen and
- II. Time in a 12-hour or 24-hour format
- III. Display date and day
- IV. Strong Waterproof
- V. Battery's Life not lasting
- VI. Stopwatch counting timer
- VII. Alarm vibration
- VIII. Light ON / OFF

Features of Smart watch :

- I. Display Time in form of analog and digits
- II. Display day and date
- III. Strong waterproof
- IV. Battery's Life not lasting
- V. Stopwatch counting timer
- VI. Alarm vibration
- VII. Light ON / OFF
- VIII. count steps, distance
- IX. measure heart rate, calories and blood pressure
- X. Touchscreen
- XI. allows connection to phone
- XII. Reply to messages
- XIII. receive calls instantly

The class AnalogWatch and DigitalWatch inherit from the class Watch.
The class SmartWatch inherit from the class DigitalWatch.

The class Watch is the superclass of Analog watch and DigitalWatch.
The class DigitalWatch is the superclass of SmartWatch. AnalogWatch and DigitalWatch are subclasses of Watch. SmartWatch is subclass of DigitalWatch.

The superclass, Watch class will contain those fields and methods that all the watch need such as :

- i. setTime(String newTime);
- ii. getTime();
- iii. setDate(String newDate);
- iv. getDate();
- v. setDay(String newDay);
- vi. getDay();
- vii. showTime();
- viii. readTime();
- ix. waterproof ();
- x. batteryLife();
- xi. print();
- xii. specialFeatures();

The subclass of Watch class is AnalogWatch class, it will contain those fields and methods such as :

- i. showTime();
- ii. readTime();
- iii. waterproof ();
- iv. batteryLife();
- v. special(String a);
- vi. special(String b, String c, String d)
- vii. print();

DigitalWatch class is the subclass of Watch class and the superclass of SmartWatch class, it will contain those fields and methods such as :

- i. setTime1(String newTime1);
- ii. getTime1();
- iii. showTime();
- iv. readTime();
- v. waterproof ();
- vi. batteryLife();
- vii. stopwatch();
- viii. alarm();
- ix. light();
- x. print();
- xi. display();

The subclass of DigitalWatch class is SmartWatch class, it will contain those fields and methods such as :

- i. showTime();
- ii. count(String a, String b);
- iii. count(String c, String d, String e);
- iv. others();
- v. print();

UML Diagram



