Title: "The digital codes"

Objectives:

1. To know about "Binary number system".
2. To learn about digital codes.
3. To learn about BCD code, gray code, excess-3 code, ASCII code and more.
4. To know about the conversion of number systems.
5. To learn about how to relate each code with other.

Introduction:

Computer is a device which cannot operate a command directly and it is to be done with special types of codes. This types of codes are called digital codes. computers system can only count the number are sequence of the voltage's ups and downs via this method, all of the programs and all of the commands are done. There are many types of codes. Such as: Binary code, binary coded decimal

or BCD code, the gray code, Ascii code and more. The description of these codes are given below:

1. Binary code:

A coding system using the binary digits 0 and 1 to represent a letter, digit, or other characters in a computers or other electronic device is called binary code. Such as 1101 is a representation of number which indicates 13 in decimal coded system. These type of code is usually generated by computer systems.

2. BCD code:

The full form of BCD is Binary coded Decimal. In computing and electronic systems, BCD is a class of binary encoding of decimal numbers where each decimal digit is represented by a fixed number of bits, usually four or eight. Like 35 is a

decimal number. In binary, it is expressed as 100011 but in BCD it is expressed as 10000110.

3. The gray code:

Gray code is an encoding of numbers so that adjacent numbers have a single digit differing by 1. The term "Gray code" is often used to refer to a "reflected" code, or most specifically still, the binary reflected gray code. The Gray code is unweighted and is not an arithmetic code. The decimal 3 represents 0011 in binary and 0010 in the gray code.

4. Excess-3 code:

Excess-3 is an unweighted binary code. It is obtained by adding 3 (0011 in binary) to the 8421 code and is reflected and self complementing.

Conclusion:

Digital codes are the basic fundamentals of computer system. These codes are fore the doing the commands are programs of a computer system, inner circuit analysis and so on. The addition, multiplication, division, substraction, logic and more arithmatical operations are done with the processing of this codes. so the digital codes and to learn about there function is very important.

References:

1. "Bodies in code: Interferences with digital media" by B.N. Hansen

2. "www.informationq.com"