MOHAMED AHMED MOHAMED KASSEM SEC: 7

Programming

A-1) Quantum computers use qubits, similar to binary a qubit can either be a 1 or a 0 but it can also be both. A quantum computer uses sub-atomic particles in a vaccume to represent a qubit.

A-2) (a) Text data: is stored as a sequence of characters. Ie: ASCII or ~~unicoding~~ schemes which uses 7 bits to represent each character. Unicoding usually uses (16 or 32) bits to represent a larger set

(b) Audio data: is stored as a waveform, representing the amplitude of it at regular intervals over time.

(c) Image data: is stored as a grid of pixle values, with each pixle representing a specific color or intensity: JPEG, PNG

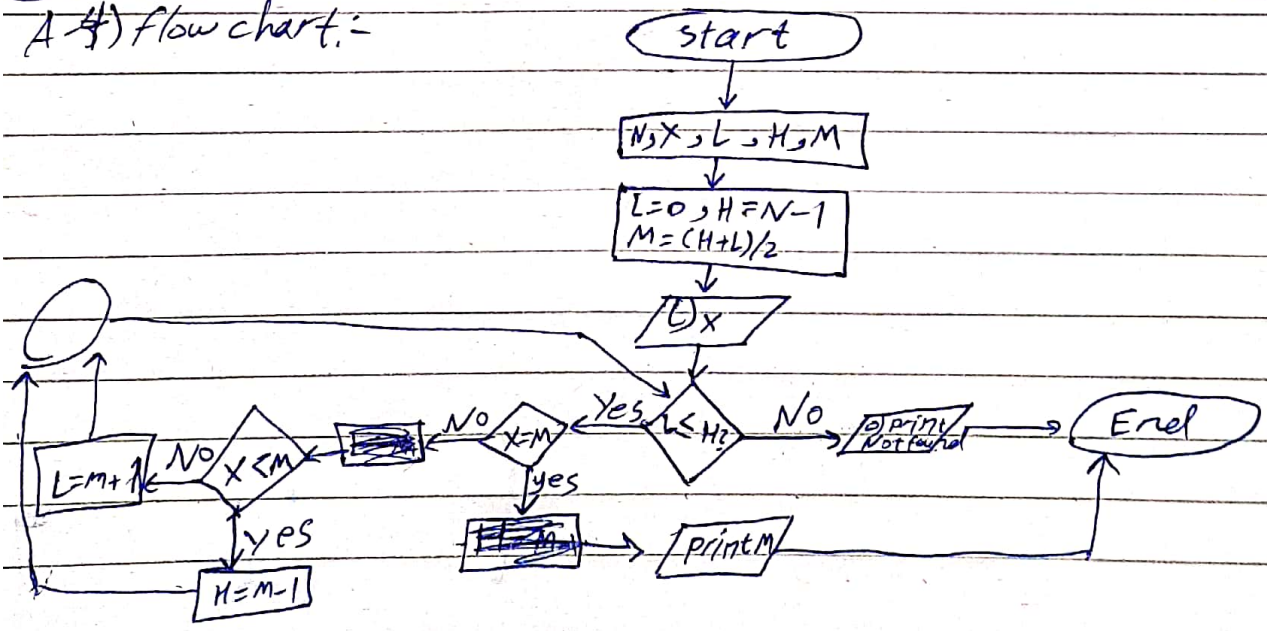
(d) Video data: is a series of Images displayed in rapid sessions MP4, AVI, MOV

A-3) 1- dividing a number by 0 . 2- Incorrect data tipe

3- Incorrect output format (Incorrect rounding)

4- Incorrect conditional expression in (if) statement

A-4) flow chart:-



Q5) Algorithm of $\sqrt{\sin x}$:-

Macsrs of $\sin x = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} \cdots + \frac{(-1)^n x^{n+1}}{(n+1)!}$

* $T_n = \frac{x^2}{n(n-1)}(-1)^n$