Department of Computer Science and Engineering

COURSE WRAPUP ASSIGNMENT

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Course Name   : CSE 101

Section   : 4

Conducted by-

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TASK 1

* Computers in communications helps us to communicate to a large number of people around the world. Also helps us to create friend from different country.

* The computers in military have been designed to do a lot more ~~mo~~ complex or hard calculations or work. In intelligence, super computers much needed so that It ~~can~~ can handle smart or complex works such as weapons management or other military works.

TASK 2

* **Abacus:** Abacus is known as the first mechanical calculating device. Addition and subtraction can easily be done by this. It's also called as counting frame. It used to be in use in mostly in Europe, China and Russia. The exact origin of Abacus is still unknown.

* **AltAir 8800:** AltAir 8800 was the beginning of personal computer. It was a micro-computer designed in 1974

* **The Macintosh:** ~~first~~ The Macintosh was the first personal computer teachning with a mouse and a graphical user interface (GUI). It also introduced us to icons.

TASK 3

(a) $(DEAD)_{16} = (????)_8$

A = 10
B = 11
C = 12
D = 13
E = 14

$13 \times 16^3 = 53248$
$14 \times 16^2 = 3584$
$10 \times 16^1 = 16$
$13 \times 16^0 = 13$

TASK 3

(a) $(DEAD)_{16} = (????)_8$

A = 10
B = 11
C = 12
D = 13
E = 14

D   E   A   D
↓   ↓   ↓   ↓
1101   1110   1010   1101

001   161   111   610   101   101
↓   ↓   ↓   ↓   ↓   ↓
1   5   7   2   5   5

→ 15 7255

∴ $(DEAD)_{16} = (157255)_8$ Ans.

b) $(12.34)_{10} = (??)_2$

$(12)_{10} =$

$$\begin{array}{r}
2\underline{|12} \;-\; 0 \\
2\underline{|6} \;-\; 0 \\
2\underline{|3} \;-\; 1 \\
1
\end{array}$$

$(0.34)_{10} =$

$0.34 \times 2 = 0.68 \;-\; 0$

$0.68 \times 2 = 1.36 \;-\; 1$

$0.36 \times 2 = 0.72 \;-\; 0$

$0.72 \times 2 = 1.44 \;-\; 1$

$0.44 \times 2 = 0.88 \;-\; 0$

$0.88 \times 2 = 1.76 \;-\; 1$

$0.76 \times 2 = 1.52 \;-\; 1$

$0.52 \times 2 = 1.04 \;-\; 1$

$0.04 \times 2 = 0.08 \;-\; 0$

$0.08 \times 2 = 0.16 \;-\; 0$

$0.16 \times 2 = 0.32 \;-\; 0$

$0.32 \times 2 = 0.64 \;-\; 0$

$\longrightarrow$

$\therefore (12.34)_{10} = (1100.01010111)_2$

TASK-4

@ $(1001)_2 + (1011)_2 \longrightarrow (10100)_2$ Ans/

$$
\begin{array}{ccccc}
 & \overset{1}{1} & \overset{1}{0} & 0 & 1 \\
 & 1 & 0 & 1 & 1 \\
\hline
1 & 0 & 1 & 0 & 0 \\
\end{array}
$$

⑤ $(11000)_2 - (10111)_2 \longrightarrow (1)_?$

$$
\begin{array}{ccccc}
1 & 1 & \overset{}{0} & \overset{}{0} & \overset{}{0} \\
1 & \overset{}{0} & \overset{}{1} & \overset{}{1} & 1 \\
\hline
0 & 0 & 0 & 0 & 1 \\
\end{array}
$$

TASK-5

w <u>Ergonomics:</u> Ergonomics is a field of study that attempts to reduce strain, fatigue, and injuries by improving product design and workspace arrangement. Many people spends hours in front of a computer without thinking about the impact of their bodies. They physically stress their bodies daily without realizing it. It can cause back pain as well as serious backbone pain. I would suggest people to take regular break and ergonomics excersize to prevent Repetitive Strain Injury (RSI).

TASK 6

(a) **Egocentric Environment:** First person vision where the user is immersed in the visual scenario

    Example: Using a VR Headset

(b) **Exocentric:** When ~~Use~~ User is placed in the room with giant screen

    Example: Projectors or cinema hall.

(b) * **Pull technology** refers to clients that make request to server.

    Example: A web browse request a web page

* **Push technology** refers to servers that initial information updates to clients.

    Example: Mobile App Notifications or instant messages that typically pushed to clients.

© Software as a Service (SaaS):

Software as a Service (SaaS) allows users to connect to and us cloud-based apps over the internet. SaaS provide complete software solution which you purchase on a pay-as-you-go basis from a Cloud service provider.

Example: Microsoft office 365, Avast Antivirus.

⑧ Virtual Reality: Virtual Reality is a simulated experience that can be similar to or completely different from real world.

Example: Taking real world simulation gaming through VR headset.