Algorithms And Programming I

Week-2 (Sample Course Module Name)

Spring Semester, 2022-2023

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Outline

- Sample Outline
- Sample Outline
- Sample Outline

Lorem Ipsum

Sample Topic

- **What is Lorem Ipsum?**

  Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s,
  - when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries,
    - but also the leap into electronic typesetting, remaining essentially unchanged.
      - It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.

Images-1

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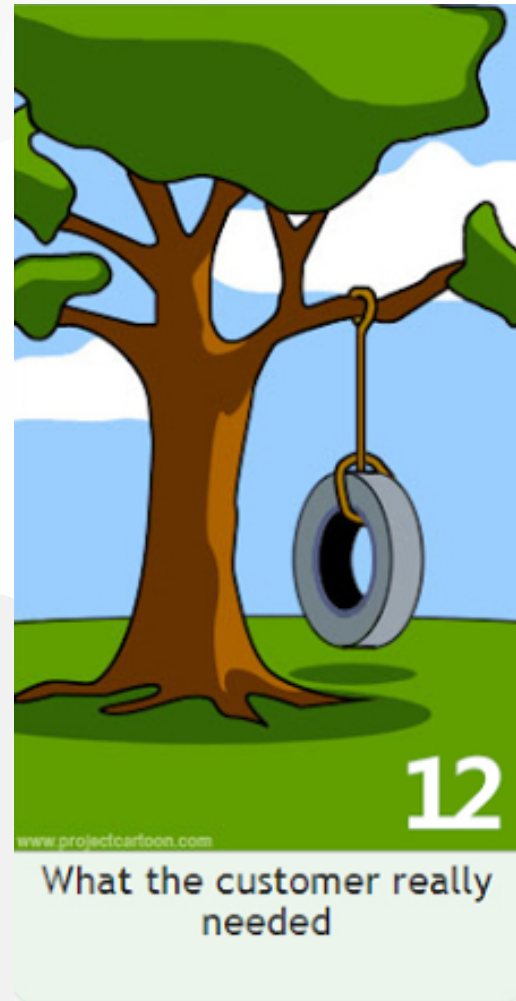
RTEU CE204 Week-2

9

11 iSwing
What marketing advertised

12
What the customer really needed

Images-6

- **What is Lorem Ipsum?**
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$$\underbrace{\{m[1,2], m[2,3], \ldots, m[n-1,n]\}}_{(n-1) \text{ values}} \left.\begin{array}{l} \text{compute } m[i,i+1] \\ \\ \end{array}\right\}$$

$$\left.\begin{array}{l} \text{for } i = 1 \text{ to } n - 1 \text{ do} \\ \quad m[i, i+1] = \infty \\ \quad \text{for } k = i \text{ to } i \text{ do} \\ \qquad \vdots \end{array}\right. \quad (1)$$

$$\underbrace{\{m[1,3], m[2,4], \ldots, m[n-2,n]\}}_{(n-2) \text{ values}} \left.\begin{array}{l} \text{compute } m[i,i+2] \\ \\ \end{array}\right\}$$

$$\left.\begin{array}{l} \ell = 3 \\ \text{for } i = 1 \text{ to } n - 2 \text{ do} \\ \quad m[i, i+2] = \infty \\ \quad \text{for } k = i \text{ to } i + 1 \text{ do} \\ \qquad \vdots \end{array}\right. \quad (1)$$

$$\underbrace{\{m[1,4], m[2,5], \ldots, m[n-3,n]\}}_{(n-3) \text{ values}} \left.\begin{array}{l} \text{compute } m[i,i+3] \\ \\ \end{array}\right\}$$

$$\left.\begin{array}{l} \ell = 4 \\ \text{for } i = 1 \text{ to } n - 3 \text{ do} \\ \quad m[i, i+3] = \infty \\ \quad \text{for } k = i \text{ to } i + 2 \text{ do} \end{array}\right. \quad (1)$$

$$c[i, i-1] \leftarrow 0$$

$$c[i, i] \leftarrow p[i]$$

$$R[i, j] \leftarrow i$$

$$PS[1] \leftarrow p[1] \Longleftarrow PS[i] \rightarrow \text{ prefix-sum } (i) : \text{Sum of all } p[j] \text{ values for } j \leq i$$

for $i \leftarrow 2$ to n do

$$PS[i] \leftarrow p[i] + PS[i-1] \Longleftarrow \text{compute the prefix sum}$$

for $d \leftarrow 1$ to $n-1$ do $\Longleftarrow$ BSTs with $d+1$ consecutive keys

for $i \leftarrow 1$ to $n{-}d$ do

$$j \leftarrow i + d$$

$$c[i, j] \leftarrow \infty$$

for $r \leftarrow i$ to j do

$$q \leftarrow min\{c[i, r-1] + c[r+1, j]\} + PS[j]{-}PS[i-1]\}$$

if $q < c[i, j]$ then

$$c[i, j] \leftarrow q$$

TODO UPDATE CONTENT FOR YOUR COURSE NOTES

References

- https://avesis.erdogan.edu.tr/ugur.coruh
- https://www.linkedin.com/in/ugurcoruh/
- https://www.hindawi.com/journals/scn/2018/6563089/
- https://dl.acm.org/doi/abs/10.1145/3410352.3410836
- https://www.sciencedirect.com/science/article/abs/pii/S2214212621002623

$$End - Of - Week - 2 - Module$$