

IN THE NAME OF GOD



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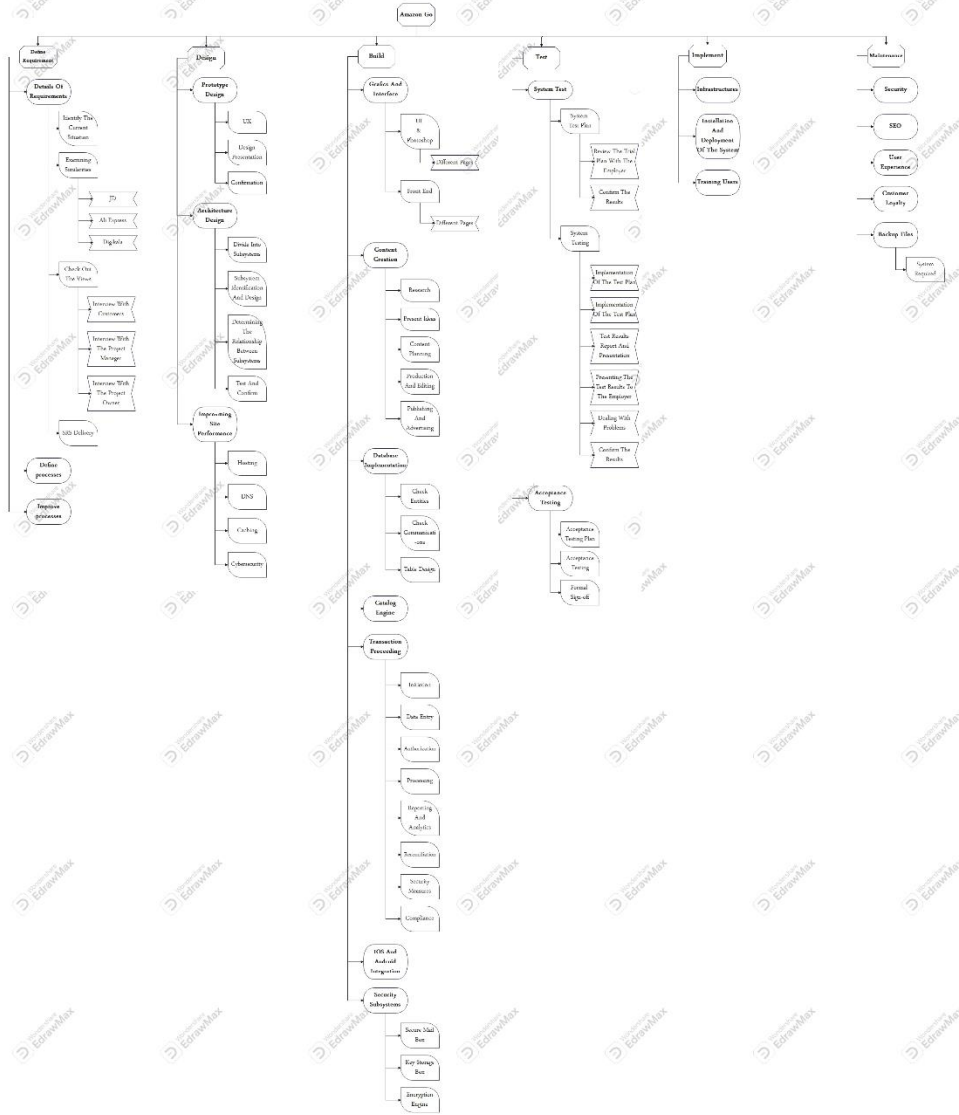
Faculty of Computer Engineering, University of Isfahan

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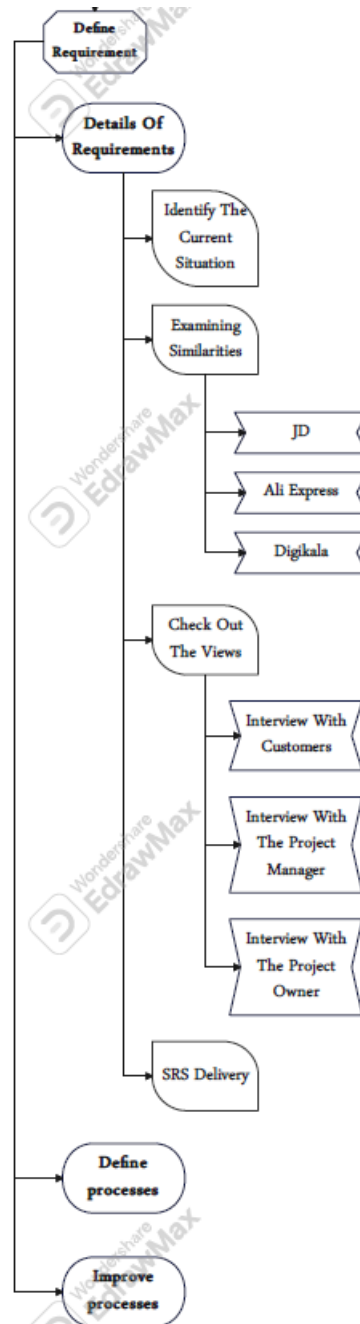
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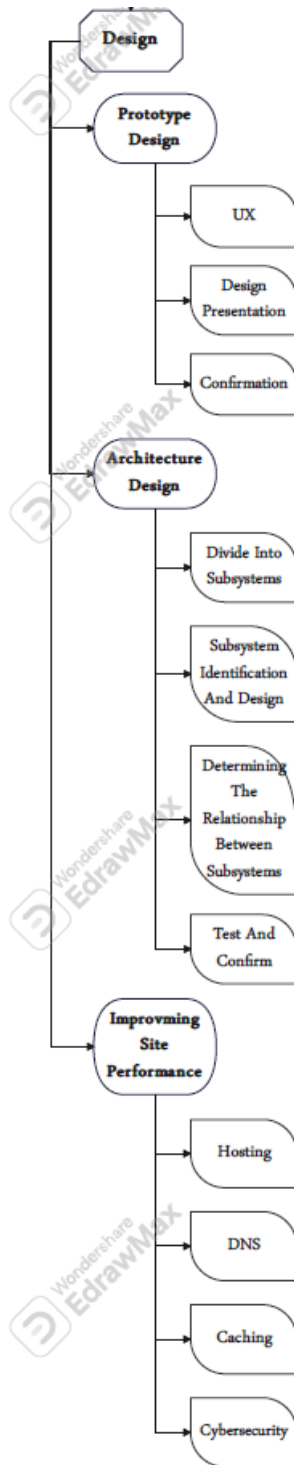
WORK BREAKDOWN STRUCTURE :



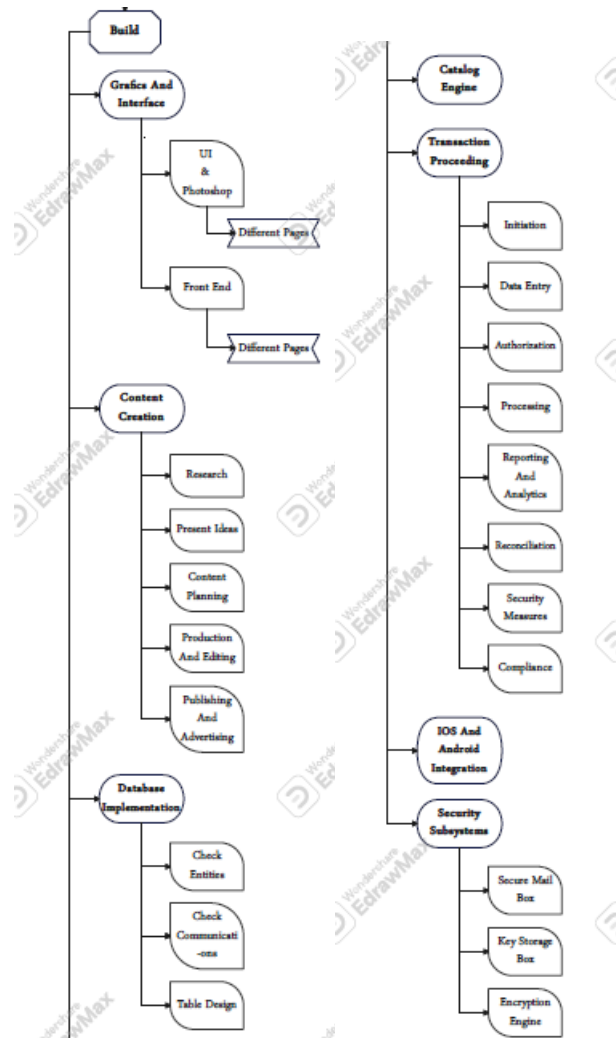
DEFINE REQUIREMENT :



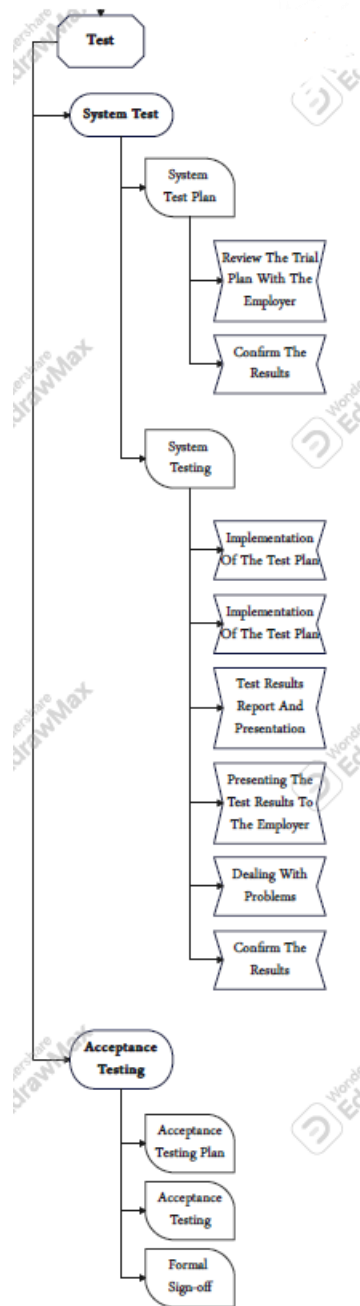
DESIGN :



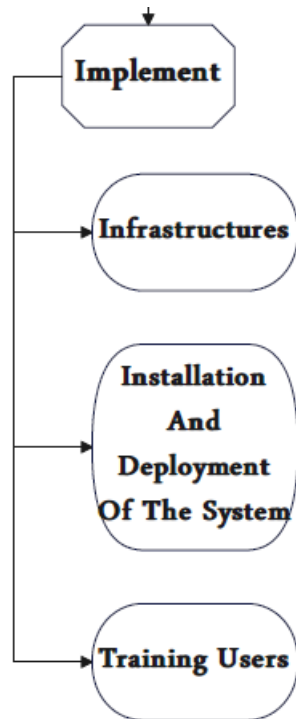
BUILD :



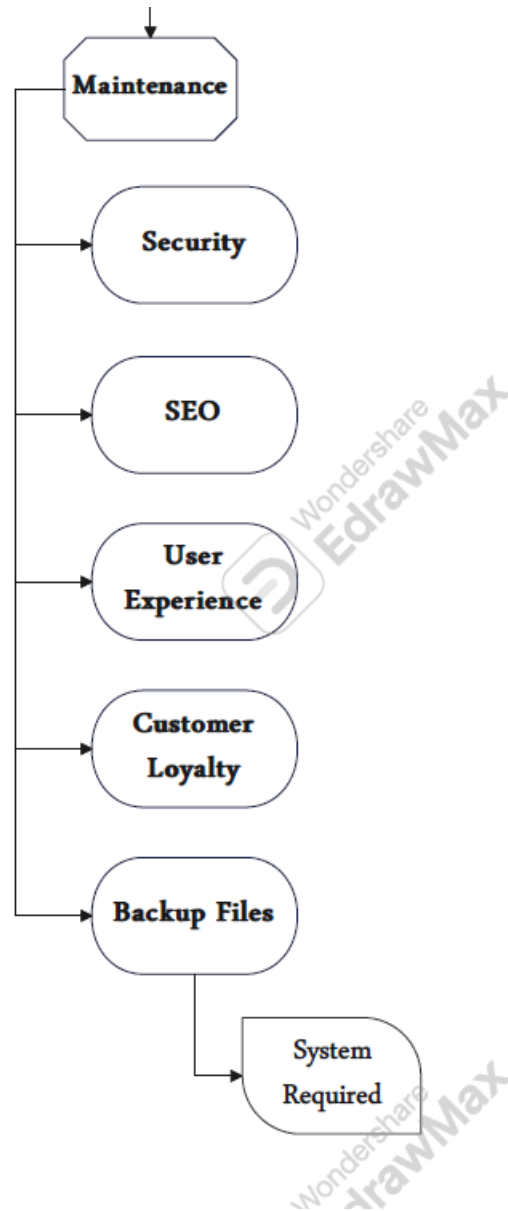
TEST :



IMPLEMENT :



MAINTENANCE :



ESTIMATION OF FUNCTIONAL POINTS :

- ✓ **ILF** : 5 Low , 2 Average , 3 High
- ✓ **EIF** : 3 Low , 6 Average , 3 High
- ✓ **EI** : 6 Low , 4 Average , 5 High
- ✓ **EO** : 6 Low , 4 Average , 3 High
- ✓ **EQ** : 3 Low , 4 Average , 3 High

Functional point / Level	Low	Average	High	Sum
<i>Internal Logical Files (ILF)</i>	$5 * 7 = 35$	$2 * 10 = 20$	$3 * 15 = 45$	100
<i>External Interface (EIF)</i>	$3 * 5 = 15$	$6 * 7 = 42$	$3 * 10 = 30$	87
<i>External Input (EI)</i>	$6 * 3 = 18$	$4 * 4 = 16$	$5 * 6 = 30$	64
<i>External Output (EO)</i>	$6 * 4 = 24$	$4 * 5 = 20$	$3 * 7 = 21$	65
<i>External Question (EQ)</i>	$3 * 3 = 9$	$4 * 4 = 16$	$3 * 6 = 18$	43
<i>UAF</i>	101	114	144	359

- ✓ **UAF** : 359
- ✓ **TDI** : 50
- ✓ **VAF** : $(TDI * 0.01) + 0.65 = (50 * 0.01) + 0.65 = 1.15$
- ✓ **FP** : $UAF * VAF = 359 * 1.15 = 412.58$

The value of functional points is equal to : 412

ESTIMATE TIME AND NUMBER OF LABOR (COCOMO) :

The average LOC for Python is equal to 48 and the value of function points is equal to 412, so the number of lines of code is :

$$48 * 412 = 19776$$

This project is both organizational and challenging :

- **Effort** : $3.6 * (\text{KDST})^{1.2} = 3.6 * (19.776)^{1.2} = 129.3192$
- **Duration** : $2.5 * (\text{Effort})^{0.32} = 2.5 * (129.3192)^{0.32} = 11.8485$
- **Persons** : $\text{Effort} / \text{Duration} = 129.3192 / 11.8485 = 10.9$

With this calculation, the number of people needed is approximately equal to 11

Good Luck

THE END