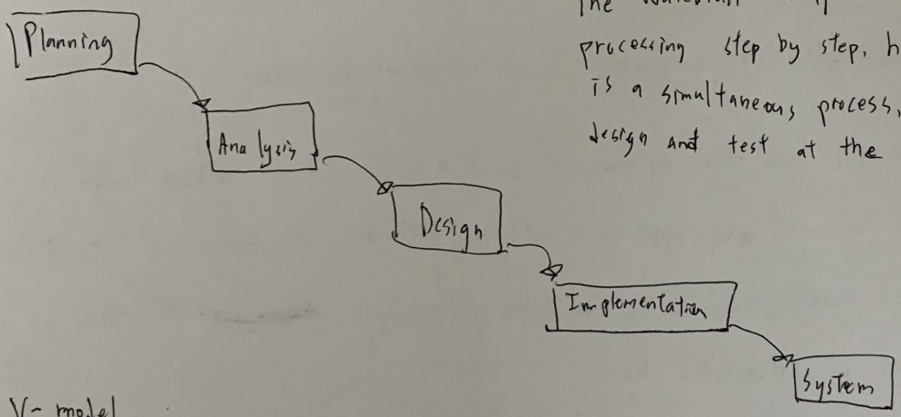
MAK Chi Wang 21004579B SE/1D

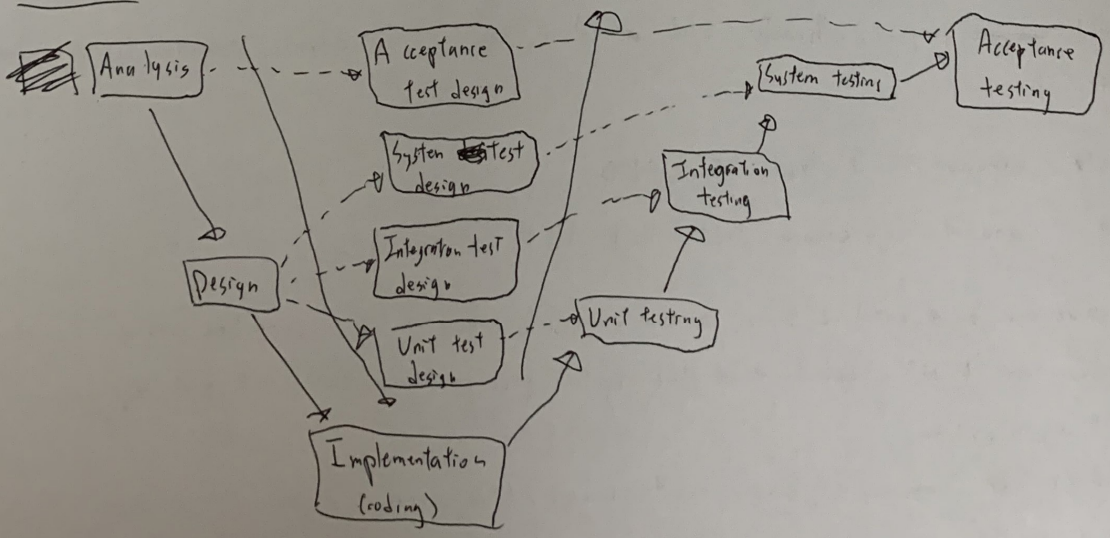
1. The systems development life cycle (SDLC) is the process of determining how an information system (IS) can support business needs, designing the system, building it, and delivering it to users. The first phase is planning, it is the fundamental process of understanding why an information system should be built, and determining how the project team will go about building it. The second phase is analysis, it answers the questions of who will use the system, what the system will do, and ~~where~~ where and when it will be used. The third phase is design, it decides how the system will operate, in terms of the hardware, software, and network infrastructure; the user interface, forms, and reports that will be used; and the specific programs, database, and files that will be needed. The final phase is Implementation, during the implementation phase, the system is either developed or purchased (in the case of packaged software) and installed.

2. Waterfall development



The waterfall development is a continuous process, which is processing step by step, however, the V-model development is a simultaneous process, which is processing ~~the~~ the ~~test~~ design and test at the same time.

V-model



MAK Chi Wang 2109 48798
5F ID

3. Parallel development, Iterative development and Agile development.

4. The first area is technical feasibility, it is the extent to which the system can be successfully designed, developed, and installed by the IT group. A technical risk analysis that strives to answer the question: Can we build it? The second are is economic feasibility, it is also called a cost-benefit analysis, that identifies the costs and benefits associated with the system. "Should we build it?". The final area is organizational / operational feasibility, how well the system ultimately will be accepted by its users and incorporated into the ongoing operations of the organization." If we build it, will they use?"

5. Client computer, input-output devices employed by users (e.g. P(s), Server, larger multi-users computers used to store software and data, The network, connects the computers.

6. Questionnaires and Document analysis.

7. Estimate system size, Estimate effort required, and Estimate time required.

8. Architecture design is a plans for how the system will be distributed across multiple computers and what hardware, operating system software, and application software will be used for each computer: The first components is data storage, the second is data access logic, the third is application logic, and final is presentation logic.

9a. Due to a tight project schedule, and unclear user requirements, waterfall development is not a good choice.

9b. Development costs: development budget 900K HKD.
Operational cost: annual maintenance cost 90K HKD.

9c. The tangible value can be quantified and measured easily (reduction in operating costs). An intangible value results from an intuitive belief that the system provides important, but hard to measure benefits to the organization.
Tangible: reduce the number of employees to reduce 5% expenses / year.
Bring up 10k more new customers and an additional income of 20% / year.
Intangible: ~~Bring up 10k more~~ Speed up the sales process thence the client will have a smooth rental or buying experience.

MAK Chi Wang 21004579g 5610

9d. Project Charter

Background : A Computer system have an online catalogue allowing the salespeople to search for the cars

Goals : Create web-based system to provide salespeople to search for the cars, POS system, with inventory management.

Scope : 1. Retrieve car information.

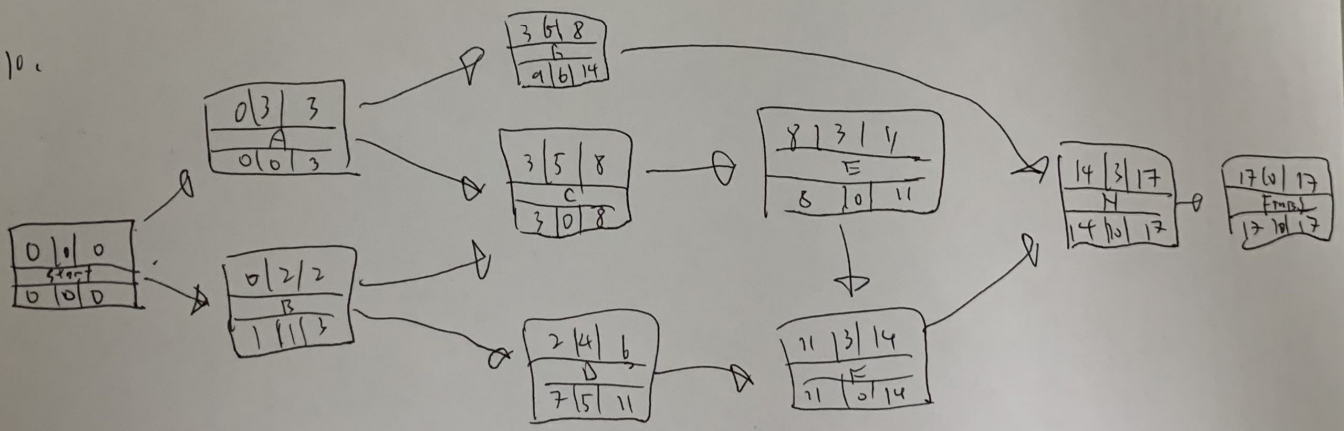
2. Reading NFC tag for car

3. Add, edit, delete car records.

Key stakeholders: Project team, Project manager, CTO

9e. Yes. Because the budget is not high, and the maintenance cost is low, with 20% additional income of 20%, and reduce 5% expenses, it is worth to invest.

10.



A	0	3	0	3	0
B	0	3	1	2	1
C	3	8	3	8	0
D	2	11	7	11	5
E	8	11	8	11	0
F	11	14	11	14	0
G	3	14	9	14	6
H	14	17	14	17	10

10b. Critical Path: A - C - E - F - H.