

Technology Science Information Networks Computing



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New Media Product Design and Development

Lecture 2. Requirement and Feasibility Analysis

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Part 03

Feasibility analysis, General
Design and Quotation

What is feasibility analysis?

Feasibility analysis

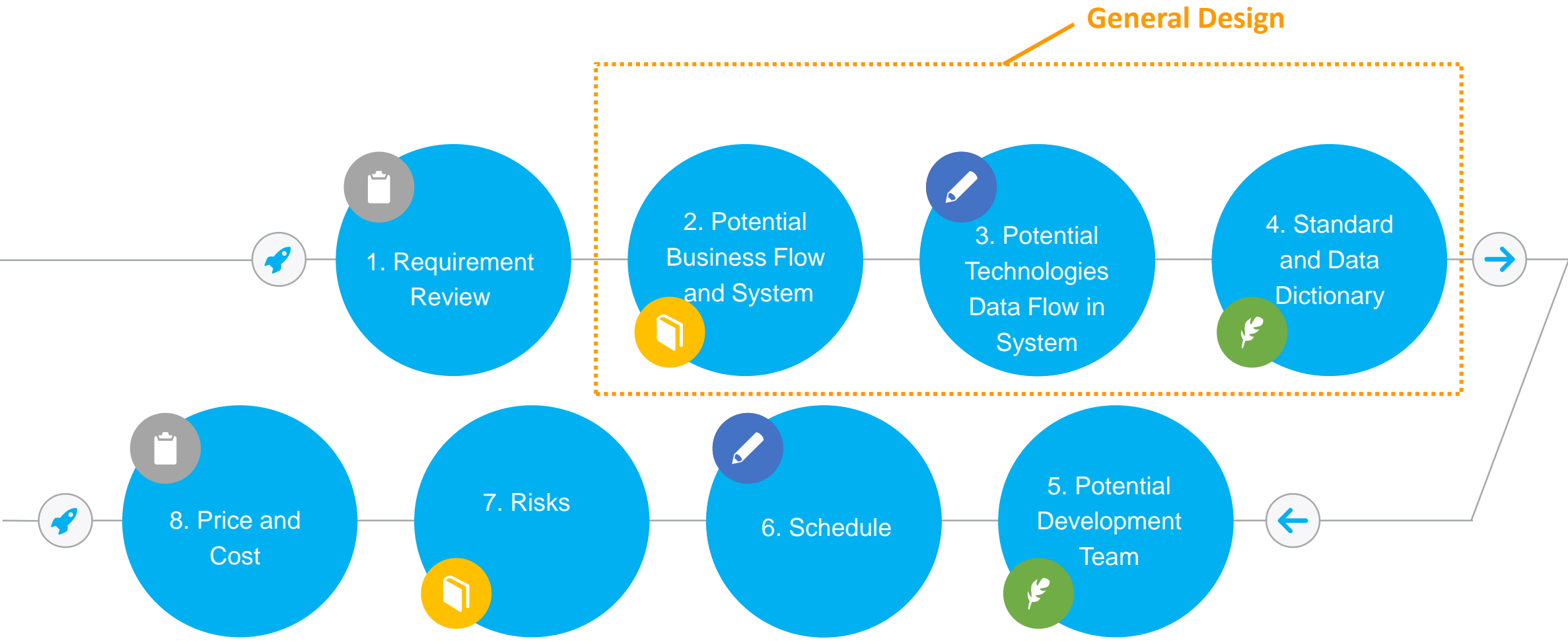
is the process of confirming that a strategy, plan or design is possible and makes sense.

This can be used to validate:

- Assumptions
- Constraints
- Decisions
- Approaches
- Business cases



How to analyze feasibility?



What is general design?

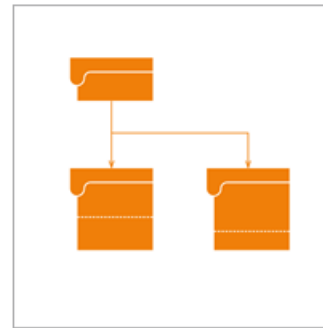
General Design (also known as Total Design)

is a systematic methodology to achieve integration of the technological as well as non-technological subjects material with the goal of creating successful products and processes.

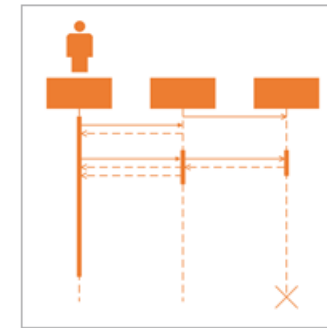
Visio

Contains:

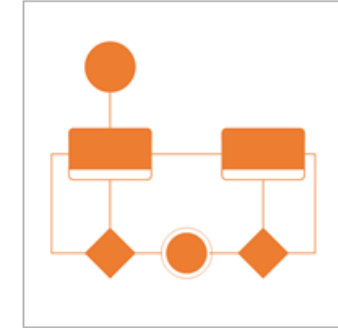
- New business flow with the potential system
- System functional components
- Data flow and data structure
- Data dictionary and term definitions
- Key algorithms and input/output
- Standards and regulations



UML 数据库表示法



UML 序列图



UML 状态机图



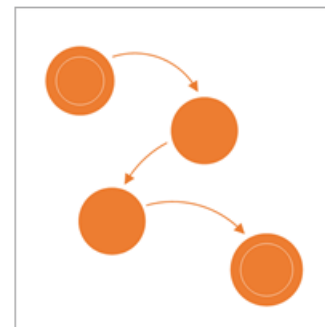
UML 活动图



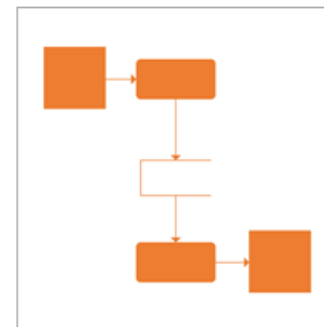
工作流程图



工作流程图



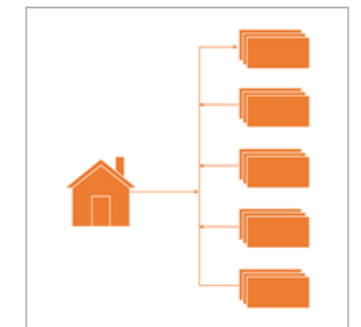
数据流图表



数据流模型图



企业应用



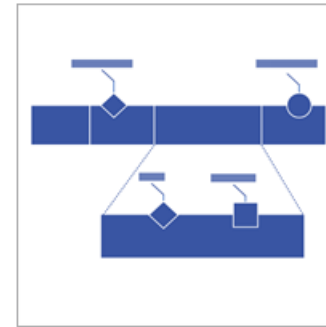
网站总体设计

Risks: you should know all your potential difficulties

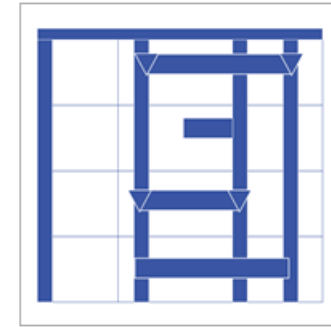
Thinking in different aspects

- Technology
- Finance
- Legislation
- Environment
- Market
- Schedule
- Team

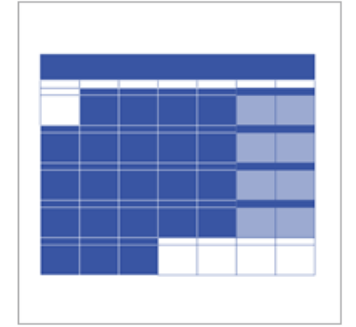
Visio



日程表

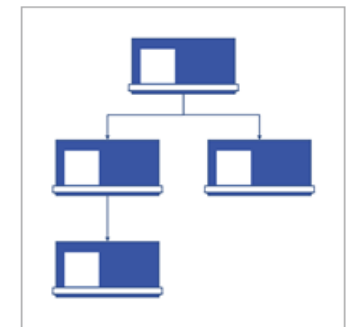


甘特图



日历

Schedule



组织结构图向导

Team

Suggested system

Document contents:

- According to the requirement
- System environment
- Architecture
- Subsystem and functional components
- Interface and manual steps

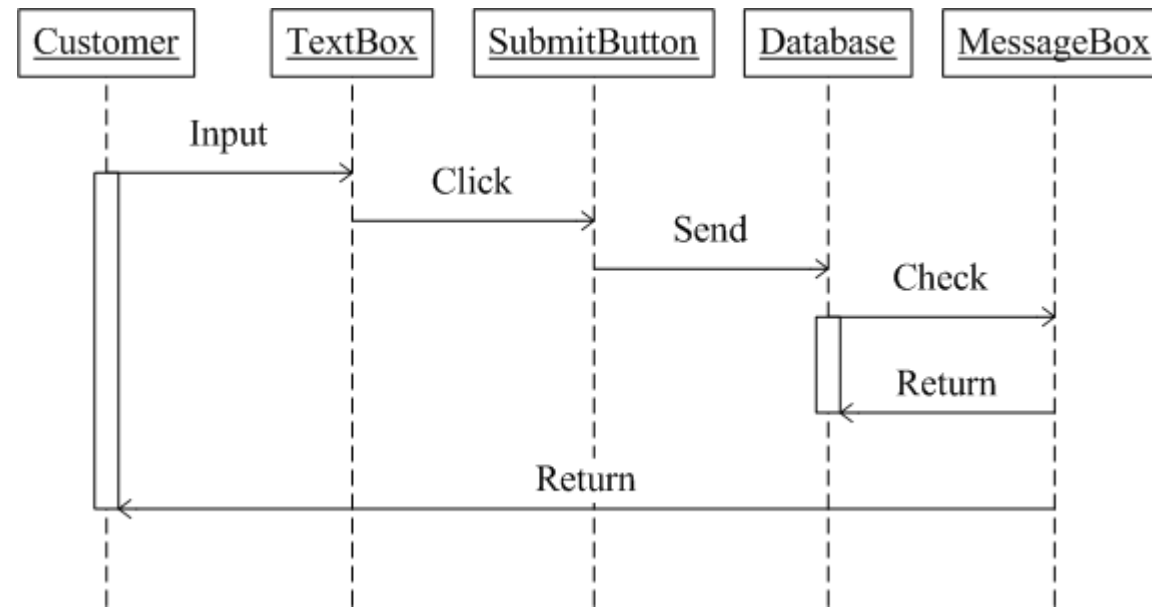
GB/T8567

- 1988
 - 《可行性研究报告》
 - 《概要设计说明书》
 - 《项目开发计划》
- 2006
 - 《可行性分析(研究)报告》(FAR)

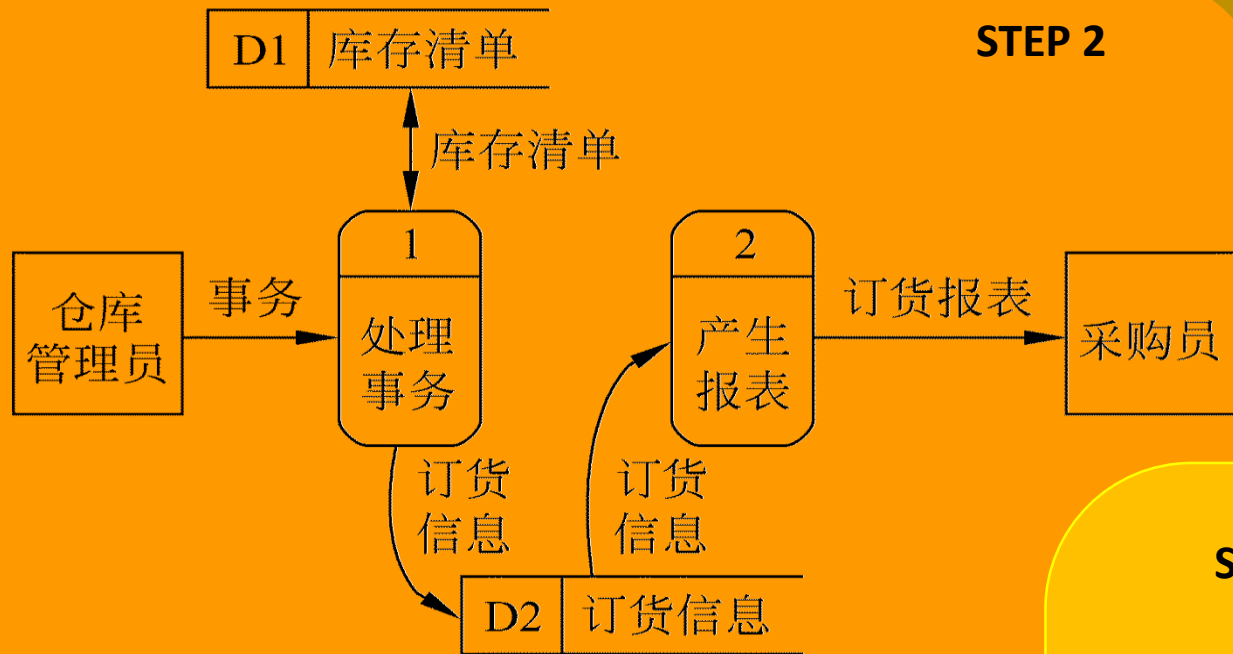


Data flow chart

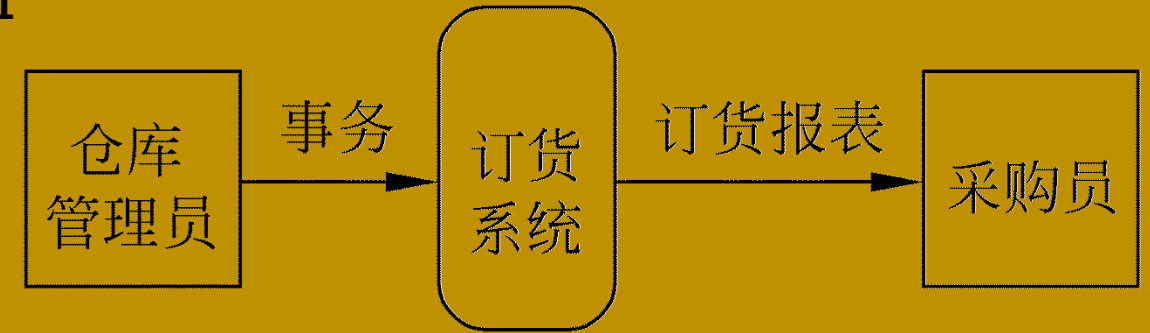
UML sequence diagram



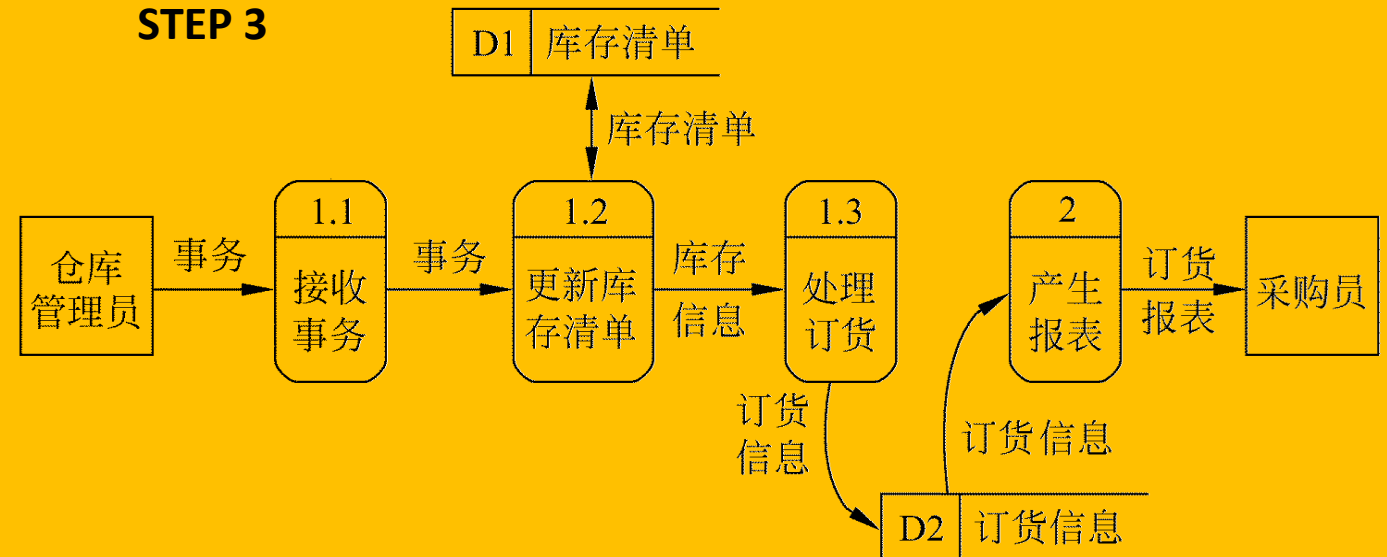
Data flow chart



STEP 1



STEP 3



Data dictionary

Example

名字:订货报表
别名:订货信息
描述:每天一次送给采购员的需要订货的零件表
定义:订货报表 = 零件编号 + 零件名称 + 订货数量 + 目前价格 + 主要供应者 + 次要供应者
位置:输出到打印机

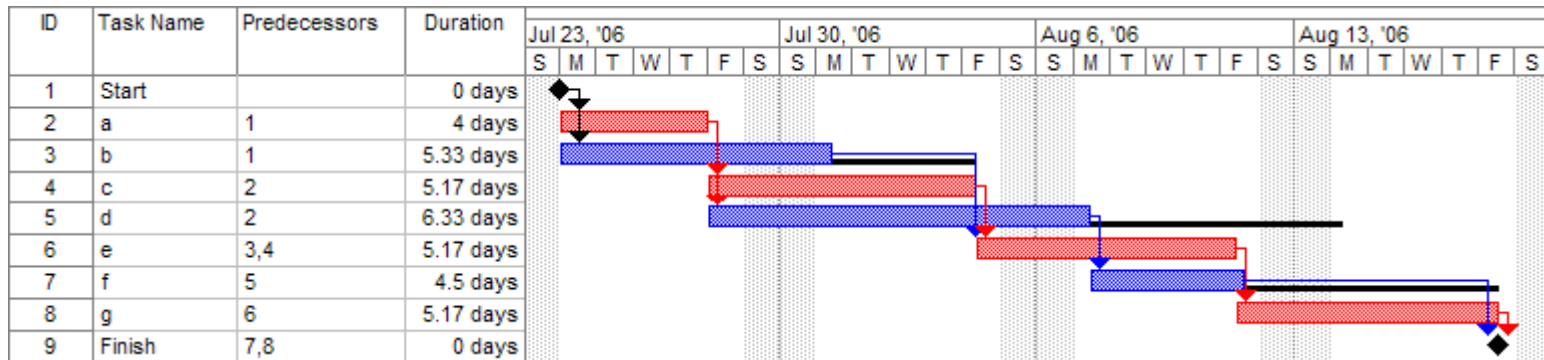
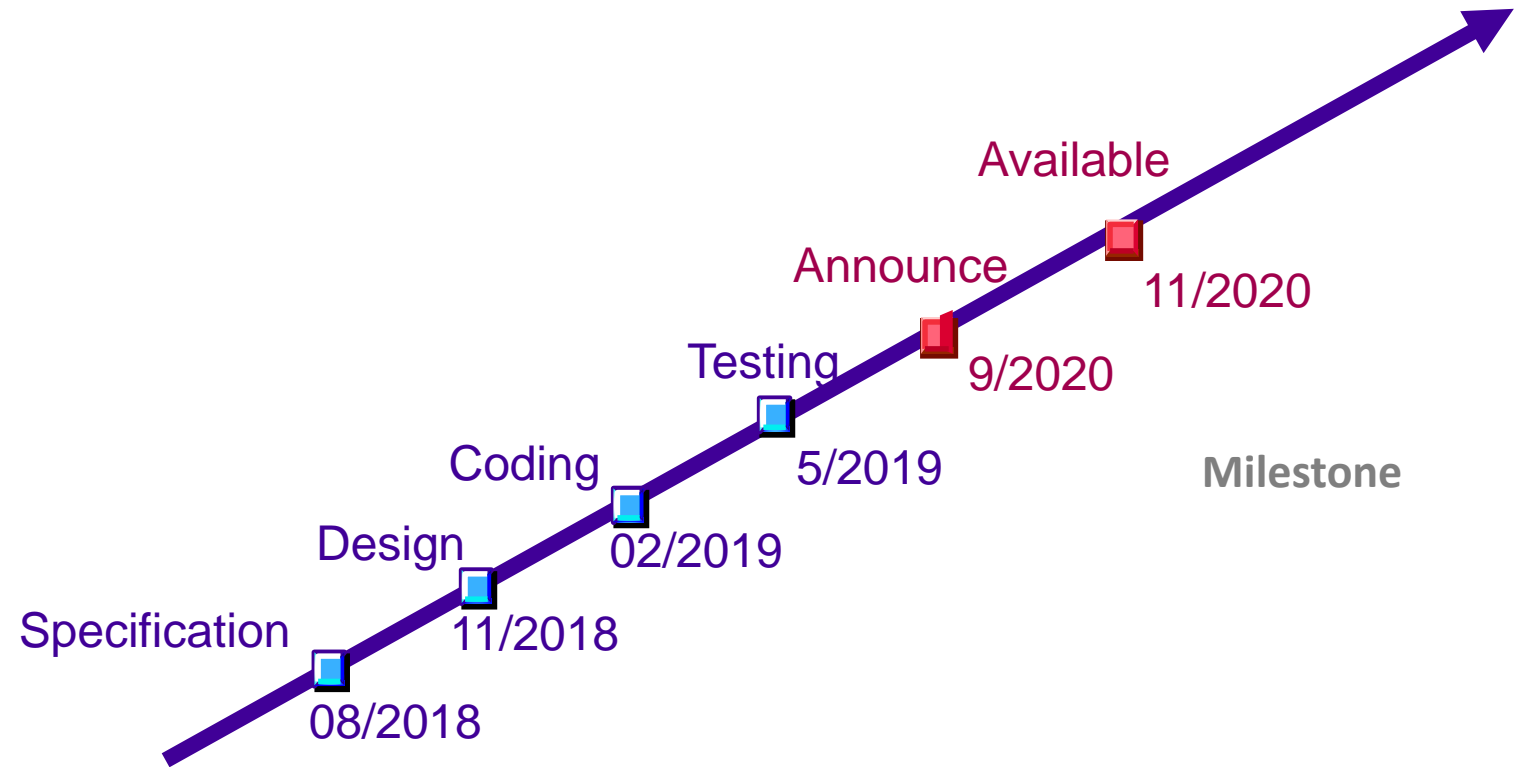
名字:零件编号
别名:
描述:唯一地标识库存清单中一个特定零件的关键域
定义:零件编号 = 8{字符}8
位置:订货报表
订货信息
库存清单
事务

名字:订货数量
别名:
描述:某个零件一次订货的数量
定义:订货数量 = 1{数字}5
位置:订货报表
订货信息

Schedule

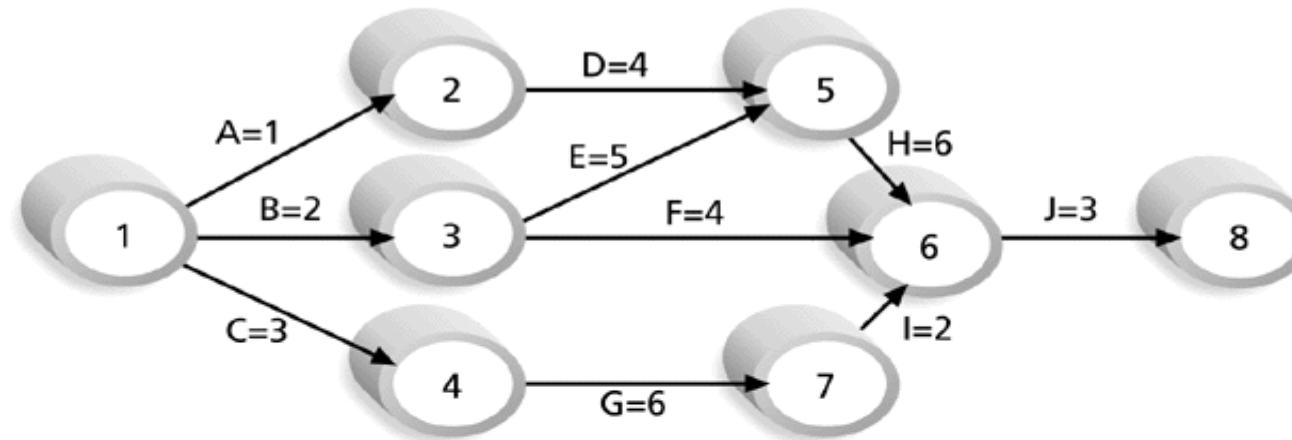
Gantt chart

Activity	Predecessor	Time estimates			Expected time (T_E)
		Opt. (O)	Normal (M)	Pess. (P)	
<i>a</i>	—	2	4	6	4.00
<i>b</i>	—	3	5	9	5.33
<i>c</i>	<i>a</i>	4	5	7	5.17
<i>d</i>	<i>a</i>	4	6	10	6.33
<i>e</i>	<i>b, c</i>	4	5	7	5.17
<i>f</i>	<i>d</i>	3	4	8	4.50
<i>g</i>	<i>e</i>	3	5	8	5.17



Critical Path

Evaluate the duration of development



Note: Assume all durations are in days.

Path 1: A-D-H-J Length = $1+4+6+3 = 14$ days

Path 2: B-E-H-J Length = $2+5+6+3 = 16$ days

Path 3: B-F-J Length = $2+4+3 = 9$ days

Path 4: C-G-I-J Length = $3+6+2+3 = 14$ days

Since the critical path is the longest path through the network diagram, Path 2, B-E-H-J, is the critical path for Project X.

Budget

Unit: man-month

2020 Computing Standard:

- RMB 20,000 for one man-month
- A simple Login Program: 0.5 man-day
- A month: 22 days

Quotation

Administration:20%

Sales:20%

Development:40%

Maintenance:10%

Tax:6%

Others:4%

序号	事项	说明	单人单价 (元)	工时 (日)
1、	设计制作			
	UI/UE制作	Android版本和iOS版本	1,000	5
		小计		
2、	Android客户端800*480原生版本			
	程序框架	搭建程序主框架	800	2
	调试接口	调试数据传输接口, 统计接口等	800	5
	公司简介	文本页面信息展示 (仅文本展示, 无额外操作, 可更新, 但需要甲方后台接口支持)	800	0.5
	企业文化	文本页面信息展示 (仅文本展示, 无额外操作, 但需要甲方后台接口支持)	800	0.5
	成功案例	成功案例介绍/信息展示 (仅文本展示, 无额外操作, 但需要甲方后台接口支持)	800	0.5
	微博分享	分享到新浪微博社交网站 (仅一个SNS网站, 再叠加需要时间和钱)	800	1
	一键直播电话	调用本地电话界面, 拨号	800	0.5
	二维码扫描	扫描二维码信息 (扫描之后下载该文档, 二维码由甲方制作完成)	800	1
	信息推送	可以推送窗口信息和出现在状态栏 (信息的编辑和推送的时间等属性由甲方后台完成)	800	3
	后台统计	统计用户登录信息 (由甲方后台统计, 此工作量算到调试接口上)		
	招聘信息	文本页面信息展示 (仅文本展示, 无额外操作, 可更新, 但需要甲方后台接口支持)	800	0.5
	友情链接	可以外链打开目标链接 (外链到手机上的默认浏览器打开, 若无浏览器, 则无法打开)	800	0.5

New Media Product Design and Development

Lecture 2-3. The End

THANK YOU

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