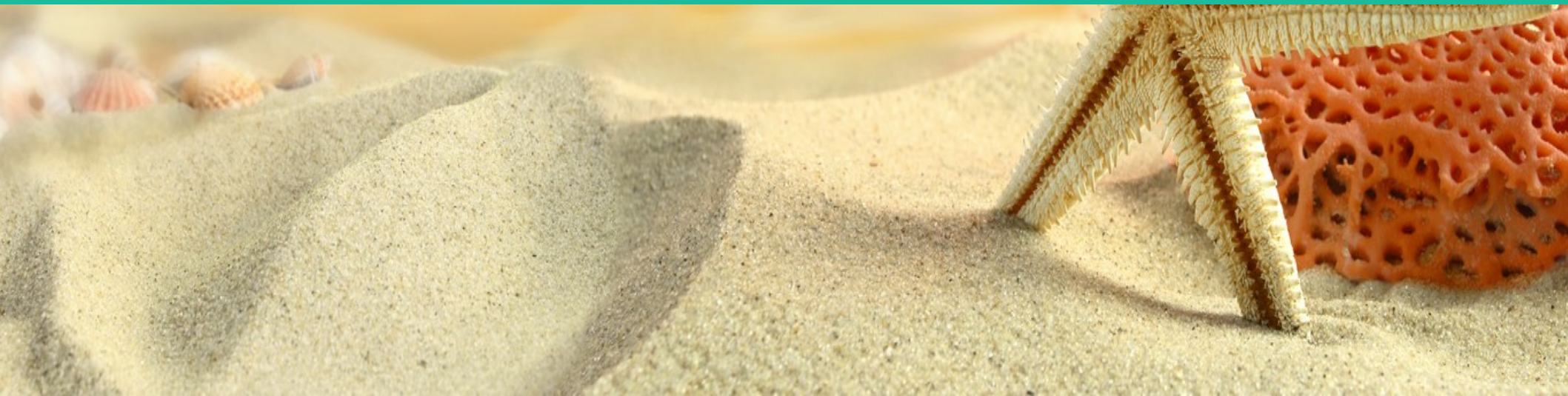
Manajemen Proyek



Mengapa Perlu manajemen proyek?

- **Dua tipe dalam metodologi proses pengembangan**
  - Plan-drivev
  - Agile
- **Apapun tipenya, seseorang perlu mengelola proyek**
- **Tahapan manajemen proyek cenderung sama**
  - Tapi beberapa detil meungkin berbeda

Aspek-aspek pada Manajemen Proyek yang terkait dengan developer

- Perencanaan proyek
- Estimasi waktu dan penjadwalan
- Manajemen sumber daya
- Pengawasan proyek
- Review Proyek dan presentasi
- Penutupan Proyek

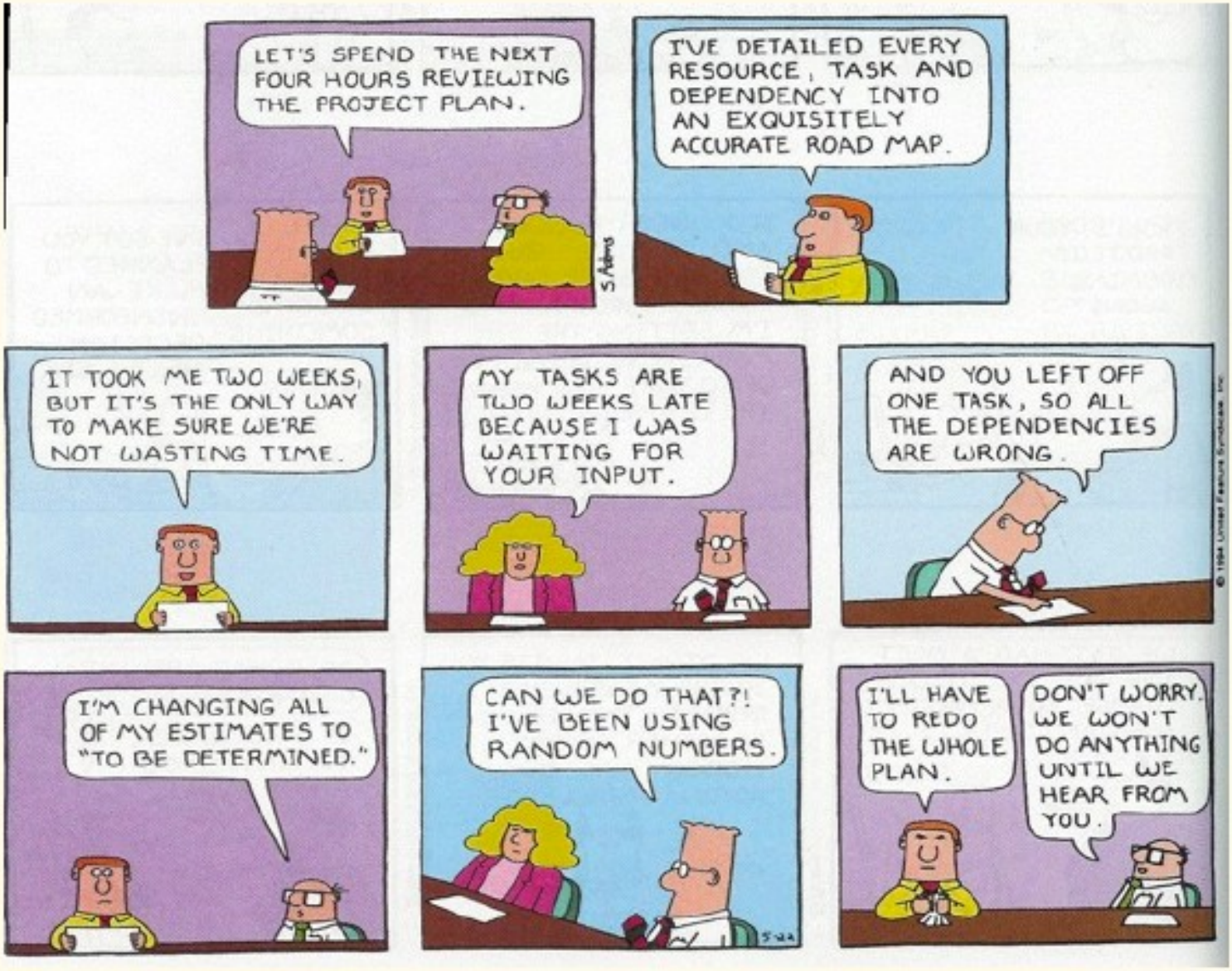
Perencanaan Proyek

- Terus berlanjut selama proyek berlangsung
- Dimulai dengan pertanyaan: Apa batasan/ruang lingkupnya?

Perencanaan Proyek

- **Apa yang termasuk dalam perencanaan Proyek**
  - Pengantar dan penjelasan dari proyek
  - Pengorganisasian proyek
  - Analisa Risiko
  - Kebutuhan Hardware dan Software
  - Breakdown pekerjaan dan estimasi waktu
  - Penjadwalan proyek
  - Mekanisme Monitoring dan Pelaporan
- **Tidak semua harus ada pada setiap jenis proyek atau metodologi**

The problem with project plans...



Pengorganisasian Proyek

- **Isi:**
  - Bagaimana anda mengorganisir tim
  - Apakah model proses yang digunakan?
  - Bagaimana perjalanan hari ke hari dari proyek

Manajemen Risiko

- **Antisipasi: Apakah hal terjelek yang bisa terjadi?**
- **Risiko yang perlu diantisipasi:**
  - Jadwal molor
  - Banyaknya bug yang ditemukan
  - Salah paham terhadap requirement
  - Requirement yang berubah-ubah
  - Pergantian staf (developer)

Contoh: proyek Personal Investment Management System (PIM)

6. Risk Management Plan

#	Risk	Probability	Impact	Mitigation Plan
1	User interface may not be acceptable as not specified fully in SRS	high	high	Build a few screens early and get approval
2	Not completing the project before the End Semester exam	high	Very high	• Break the project into 2 iterations and ensure that at least the 1st iteration is delivered successfully • Keep vacation time as slack time, and use if necessary
3	Quality may not be good	medium	medium	Use tools like Junit for Unit Testing
4	Rate Computation not correct	medium	high	Get some good test cases for different inputs and their known ROI and compare results

Manajemen Sumber daya

- **Sumber daya meliputi:**
  - Manusia:
    - Berapa orang yang dibutuhkan?
    - Apakah semua memulai secara bersamaan?
  - Hardware dan software
    - Berapa komputer yang dibutuhkan
    - Software apa yang dibutuhkan?
    - Apakah semua orang sudah terlatih dengan software yang akan digunakan?
  - Ruangan, peralatan penunjang, staf penunjang
- **Ada sebagian yang bisa dijawab dengan mengetahui target platform untuk produk yang dibuat, sedangkan pertanyaan ukuran tim, fase pengerjaan harus melalui estimasi pengerjaan terlebih dahulu.**

Contoh: Proyek Software Personal Investment Management System (PIMS)

3. Team Organization

We will have a small team; hence we use a flat team structure of peers, with one person having an additional role of project manager. Following table gives the organization:

Name	Role
Dr. Pankaj Jalote	Supervisor
Kapil Narula	Developer
Ragesh Jaiswal	Developer
Vivek Pandey	Project Leader

The assignment of tasks to them will be maintained in the detailed schedule, a high-level view of which is given above.

4. Hardware and Software resources required

The only hardware resource required is an internet connection. Following are the main software resources that are required:

Software	Purpose
Junit	Unit testing
xlhtml	This software covert an xls file to html. Used for parsing the downloaded file of share prices

Estimasi dan Penjadwalan

- Lebih dahulu ketahui ukuran pekerjaan
- Lalu effort dan estimasi biaya
- Lalu jadwal

Ukuran?

- **Lebih dahulu ketahui ukuran pekerjaan:**
  - Breakdown pekerjaan dalam tahapan-tahapan task kerja
  - Breakdown tahapan pengerjaan jangan lebih lama dari 1 minggu
    - 1 -2 hari lebih baik
  - Ukuran bisa ditentukan dari hal-hal berikut:
    - Jumlah modul fungsional
    - Jumlah kelas
    - Jumlah metode
    - Jumlah function point
    - Line of code tanpa komentar

Contoh: Proyek PIMS

- **Setelah breakdown dalam modul, proyek dibagi dalam 2 iterasi**

First Iteration:. The core modules will be developed in this iteration which would include the following modules:

Module	Purpose
Data Access Layer	Manage the database
Master Controller	The basic GUI for PIMS
Create/Delete/Rename/Edit Portfolio/Security/Transaction	Data processing modules for maintaining the database
Net Worth/ROI computation engine	Computation of Net Worth and ROI
Current Value System	Give the current price of a share. In this iteration the value will be fed by the user

Second Iteration. This iteration would complete the product in its full functionality. The following enhancements will be done in this iteration:

Module	Purpose
Alert system	Give alerts to the user
Net Loader	Downloads the current price of shares from a remote database
User Authentication System	This is a simple logging facility, provided for safe access to Investment database
Install module	For a user friendly installation of PIMS

Effort

- **estimasikan effort/usaha dibutuhkan untuk penyelesaian sebuah task kerja**
- **Effort: berapa lama dibutuhkan untuk mengerjakan task kerja**
  - Bukan jadwal
  - Tapi estimasi jumlah jam yang dibutuhkan
  - Oleh karena itu task kerja harus dibuat kecil
- **Setelah estimasi, baru dibuat penjadwalan**

Contoh Perkiraan Effort (beban kerja), Jadwal, dan Tim: Software PIMS

1.4 Effort, Schedule and Team:

The team comprises of the following 4 persons:

a. Dr. Pankaj Jalote
b. Kapil Narula
c. Ragesh Jaiswal
d. Vivek Pandey

Following is the schedule and effort for the 2 iterations:

Iteration #	Start Data (dd/mm/yyyy)	End date (dd/mm/yyyy)	Total Effort (person-hours)
Iteration 1	27/09/2003	24/10/2003	192
Iteration 2	25/10/2003	05/11/2003	88

Total Effort in man-hours: 280
Final delivery date: 06/11/2003

1.5 Assumptions made:

No major assumptions beyond what is stated in the SRS.

Detail Effort dan Penjadwalan

2. Detailed Effort and Schedule

We use the bottom up approach for estimation. In this we list the major modules and tasks and then estimate their effort and schedule. Task assignment to project members is also specified.

2.1 First Iteration:

#	Task	Estimated Effort (man-hrs)	Start Date (dd/mm/yyyy)	End date (dd/mm/yyyy)	Person	Actual Effort (man-hrs)
1	Create/Delete/Rename Portfolio/Security	24	27/09/2003	29/09/2003	Vivek	
2	Create/Delete/Edit Transaction	16	30/09/2003	02/10/2003	Ragesh	
3	Data Access Layer for the above	10	02/10/2003	04/10/2003	Ragesh	
4	GUI	80	06/10/2003	18/10/2003	Kapil & Vivek	
5	Compute Net-Worth	10	19/10/2003	20/10/2003	Ragesh	
6	Compute ROI	10	21/10/2003	22/10/2003	Ragesh	
7	Current Value System	8	21/10/2003	22/10/2003	Vivek	
8	Interfacing GUI with	14	22/10/2003	23/10/2003	Kapil	
	the core modules					
9	System testing for the first iteration	20	23/10/2003	24/10/2003	All	

The estimated effort in person-hours for the first iteration (including testing): **192**

Detil effort iterasi kedua

2.2 Second Iteration

#	Task	Estimated Effort (man-hrs)	Start Date (dd/mm/ yyyy)	End date (dd/mm/ yyyy)	Person	Actual Effort (man-hrs)
1	Alert System	8	25/10/2003	25/10/2003	Vivek	
2	Net Loader	32	25/10/2003	28/10/2003	Ragesh	
3	User Authentication System	8	29/10/2003	29/10/2003	Kapil	
4	Installation system	10	30/10/2003	31/10/2003	Ragesh	
5	System testing for second iteration	20	01/11/2003	03/11/2003	All	
6	Documentation	10	04/11/2003	05/11/2003	Ragesh	

The estimated effort in person-hours for the second iteration (including testing): **88**

Manajemen Kualitas dan Pengawasan (Case Study: Proyek PIMS)

5. Quality Plan

The quality control process for this project will consist of the following:

- *SRS and Architecture Review*: The SRS and Architecture of PIMS will be reviewed by a team including people from outside.
- *Design Review:* Design document will be reviewed by the project team.
- *Unit Testing:* Each programmer is responsible for Unit Testing his module. The modules Create/Delete/Rename/Edit Portfolio/Security/Transaction and Compute Net Worth/ROI will be tested with Junit. For some modules, unit testing report will be produced.
- *System Testing:* Will be done according to the system test plan, which will describe the testing strategy as well as list all the test cases. The test plan will be reviewed.

Post Mortem (Penutupan Proyek)

- **Evaluasi untuk perbaikan proyek mendatang**
- **Menjawab pertanyaan berikut:**
  - Apa saja yang telah berjalan dengan benar dari proyek yang diselesaikan?
  - Apa saja yang salah?
  - Permasalahan apa yang muncul?
  - Bagaimana kita bisa mengatasi untuk proyek berikutnya?


Semoga
Bermanfaat