SIGMA FIVE PTE LTD

Online Movie Ticketing System

Software Project Plan

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- Editorial, formatting, and spelling
- Clarification
- Document structure

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Revision	Date	Created by	Short Description of Changes
0.1	23/01/2008	Nor Rahim	Draft
0.2	24/01/2008	Nor Rahim	Amended project resources
0.3	26/01/2008	Nor Rahim	Added finalized project schedule and costing
0.4	27/01/2008	Nor Rahim	Amended project resources

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Table of Contents

Software Project Plan

1 Introduction

1.1 Project Scope

Cinematic Entertainment Group a leading, Entertainment Company, has engaged, Sigma Five Pte Ltd to develop an online movie ticketing system, by the 28th February 2008. With the internet growing rapidly and purchases are conveniently done online, this strategic move would elevate their position in the industry and would greatly benefit their current clientele, not forgetting increasing their customer base.

1.2 Major Software Functions

The online movie ticketing system shall host a list of movie blockbusters which are currently screening in their 5 cinemas and upcoming in the near future. System shall allow users to view in-depth movie details and their screening times. Users shall be able to book and purchase up to 5 tickets per session through the system. Payment can be made either through cash when they collect the tickets or even through credit card online. Users are able to register and be entitled to benefits such as monthly promotions and also a virtual bank, which allows them to deposit money for future purchases.

1.3 Performance / Behavior Issues

System shall be able to handle bookings for the total 5000 seats spread throughout the 5 cinemas. Users are allowed to purchase a maximum of 5 tickets per session. System shall be implemented on a high specification server to allow high volume transactions.

1.4 Management and Technical Constraints

System shall be demonstrated to relevant stakeholders on dead date 28th February 2008. There are inadequate software licenses needed for the planning and development of the system. The team manpower for this project is limited.

2 Project Estimates

2.1 Estimate

Project Duration: 22nd January 2008 – 10th March 2008

Effort: 1612 total man-hours based on 8hr per day, 5 days per week.

Individual: PM $50/hr

                       BA $25/hr

Total Project Cost: $48262.50

2.2   Project Resources

Manpower	Online Applications Team from Sigma Five Pte Ltd
Hardware	IBM eServer, 5 laptops
Software	Visual Studio 2002, My SQL 5, Internet Explorer 6, Microsoft Office Package, Microsoft Visio, Microsoft Windows XP SP2, Microsoft Windows Server 2003 R2
Tools	Nil
Other Resources	Nil

3   Risk Management

3.1   Project Risks

The following are the risks which could affect the development of the project.

- Unidentified objectives

- Unclear requirements

- Delay in the delivery of the sub-systems leading up to the final system

- Project team understaffed

3.2   Risk Table

Magnitude	Risk Description	Impact	Mitigation Strategy / Contingency Plan
7	Unclear Requirements	C	• Meeting with individual stakeholders to understand their requirements.

Magnitude	Risk Description	Impact	Mitigation Strategy / Contingency Plan
			• Development will only proceed with approval from various stakeholders.
7	Delay in delivery of sub-systems	C	• Frequent inter-team meetings and maintaining of milestones
4	Project Team understaffed	H	• Interviewing some candidates for vacant positions
5	Incompatibility with internet browsers and their configurations on the clients machines	H	• Apply cross-browser technologies and coding to meet requirements of most internet browsers.
2	Departure of any team members	C	• Review milestones frequently, quality of documentations to be reviewed and approved by respective Team Leads and QA & Change management Lead.

The risk table uses the following:

- Magnitude

  o Risks are ranked from 1-10. 1 being the lowest and 10 being the highest. It is based upon criticality of the risk and probability of it occurring.

- Description

  o Risk's brief description

- Impact

  o C – Critical (Affects all project functionalities)

- o H – High (Affects stakeholders requirements and major system functionalities)

- o M – Medium (Risks are subject contingency, often, a mitigation plan will be deployed to avoid it)

- o L – Low (Quick mitigation plan will be implemented)

4 Project Schedule

4.1 Project Task Set

The software development process we will be adopting in this project is Unified Process, which is an iterative and incremental software development process framework. It divides the project into four phases.

- Inception

  - o Project scope, identification of risks, estimated project schedule and cost estimate are established in this phase.

- Elaboration

  - o Most of the system requirements, usage scenarios, use-cases, system architecture are established in this phase.

- Construction

  - o The major phase in the framework, most of the construction and testing of the increments of the system are done in this phase.

- Transition

  - o The final phase in the framework, the system is deployed to the stakeholders. End-user training will also be scheduled in this phase.

4.2 Functional Decomposition

The functional decomposition are displayed in the following work breakdown structures.

The project is divided into 4 main phases as shown in the diagram below.

```
                          ┌─────────────────┐
                          │     Project     │
                          └────────┬────────┘
        ┌──────────────────┬───────┴────────┬──────────────────┐
┌───────────────┐ ┌───────────────┐ ┌───────────────┐ ┌───────────────┐
│   Inception   │ │  Elaboration  │ │ Construction  │ │  Transition   │
│     Phase     │ │     Phase     │ │     Phase     │ │     Phase     │
└───────────────┘ └───────────────┘ └───────────────┘ └───────────────┘
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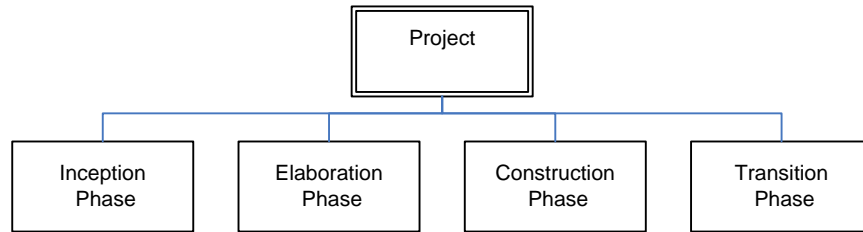
The following shows the breakdown of the Inception phase.

```
                          ┌─────────────────┐
                          │    Inception    │
                          │      Phase      │
                          └────────┬────────┘
                          ┌─────────────────┐
                          │    Software     │
                          │Development Plan │
                          └────────┬────────┘
   ┌───────────┬──────────────┬────┴────────┬──────────────┬───────────────┐
┌────────────┐┌──────────────┐┌───────────────┐┌────────────┐┌───────────┐┌──────────────────┐
│ Estimates &││Project       ││Project        ││Project     ││ Risk List ││Tracking & Control│
│ Resources  ││Schedule      ││Initiation     ││Organization││           ││                  │
└────────────┘└──────────────┘└───────────────┘└────────────┘└───────────┘└──────────────────┘
```

The following shows the breakdown of the Elaboration phase.

```
                          ┌─────────────────┐
                          │Elaboration Phase│
                          └────────┬────────┘
        ┌─────────────────────────┴───────────────────────────┐
┌─────────────────┐                                  ┌─────────────────┐
│  Requirements   │                                  │     Design      │
│   Specfication  │                                  │  Specification  │
└────────┬────────┘                                  └────────┬────────┘
  ┌──────┬──────┴───────┬──────────────┐             ┌─────────┴─────────┐
┌──────────┐┌──────────┐┌──────────┐┌──────────────┐┌──────────────┐┌──────────────┐
│ Domain   ││ Usage    ││ Data     ││Requirements  ││Architectural ││User Interface│
│Modelling ││Scenarios ││Modelling ││Gathering with││Design        ││Design        │
│          ││          ││          ││Stakeholders  ││              ││              │
└──────────┘└──────────┘└──────────┘└──────────────┘└──────────────┘└──────────────┘
```
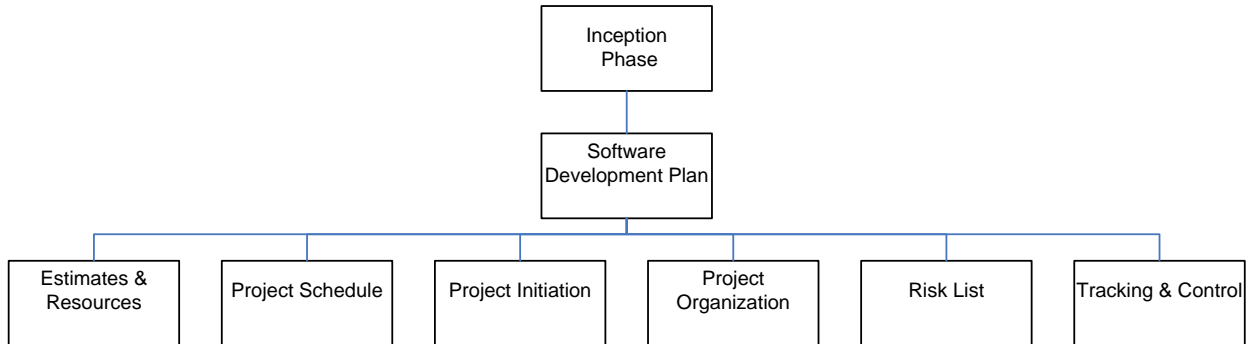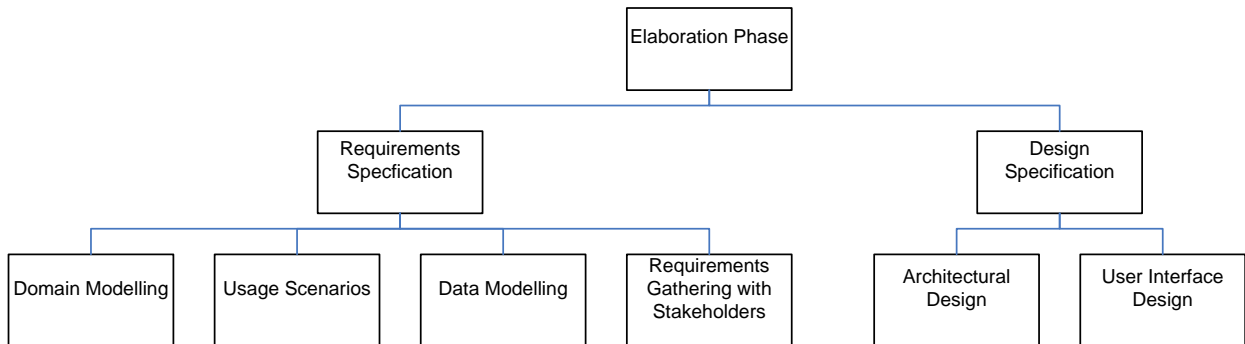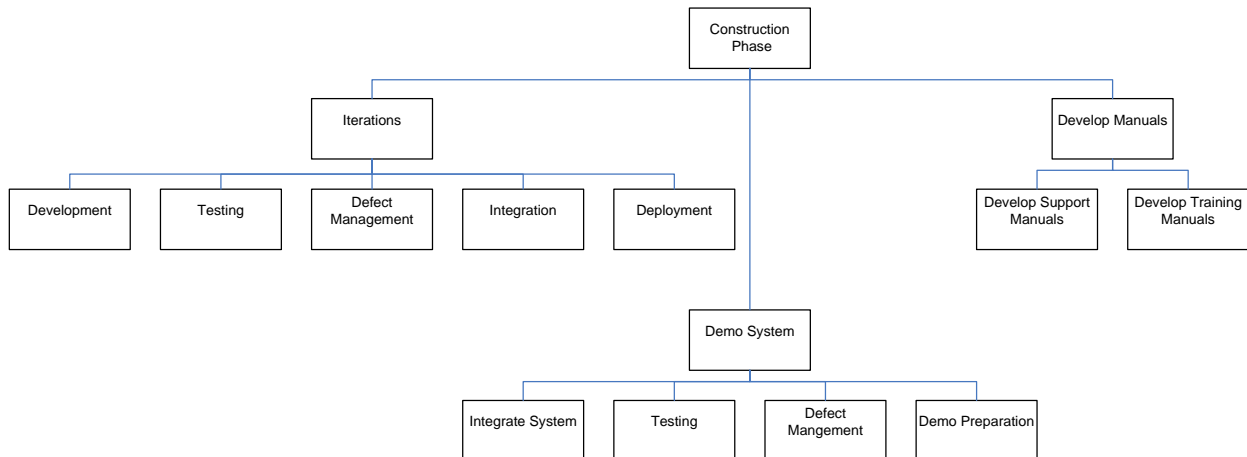
The following shows the Construction Phase.

```
                          ┌─────────────────┐
                          │  Construction   │
                          │      Phase      │
                          └────────┬────────┘
        ┌─────────────────────────┼────────────────────────────┐
┌─────────────────┐               │                   ┌─────────────────┐
│   Iterations    │               │                   │ Develop Manuals │
└────────┬────────┘               │                   └────────┬────────┘
  ┌──────┬────────┬────────┬──────┤                     ┌───────┴───────┐
┌──────────┐┌────────┐┌────────┐┌──────────┐┌──────────┐┌──────────────┐┌──────────────┐
│Development││Testing ││Defect  ││Integration││Deployment││Develop Support││Develop Training│
│          ││        ││Manage- ││          ││          ││Manuals       ││Manuals       │
│          ││        ││ment    ││          ││          ││              ││              │
└──────────┘└────────┘└────────┘└──────────┘└──────────┘└──────────────┘└──────────────┘
                          ┌─────────────────┐
                          │   Demo System   │
                          └────────┬────────┘
        ┌──────────────┬───────────┴──────────┬──────────────────┐
┌──────────────┐┌──────────┐┌──────────────┐┌──────────────────┐
│Integrate     ││ Testing  ││Defect        ││Demo Preparation  │
│System        ││          ││Mangement     ││                  │
└──────────────┘└──────────┘└──────────────┘└──────────────────┘
```

The following shows the Transition Phase.

```
                        ┌─────────────────┐
                        │ Transition Phase │
                        └─────────────────┘
                    ┌───────────┼───────────┐
          ┌──────────────┐ ┌──────────────┐ ┌──────────┐
          │ Management &  │ │ Deployment for│ │ Training │
          │ Support for UAT│ │  Production   │ │          │
          └──────────────┘ └──────────────┘ └──────────┘
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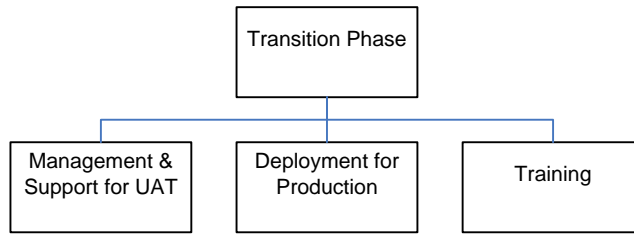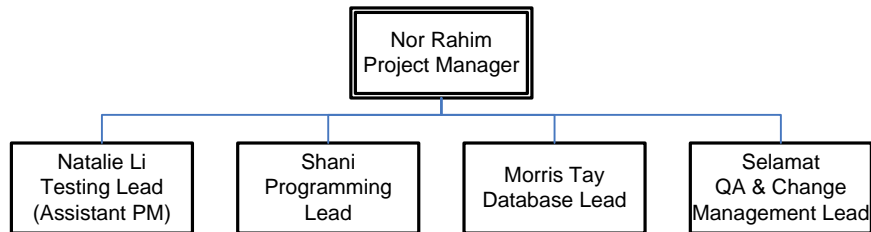
4.3   Task and Timeline Chart

Refer to Appendix A

Refer to Appendix B

5   Staff Organization

5.1   Team Structure

```
                        ┌─────────────────┐
                        │   Nor Rahim      │
                        │ Project Manager  │
                        └─────────────────┘
        ┌──────────────┬─────────┴────────┬──────────────┐
┌──────────────┐ ┌──────────────┐ ┌──────────────┐ ┌──────────────┐
│ Natalie Li    │ │   Shani       │ │  Morris Tay   │ │   Selamat     │
│ Testing Lead  │ │ Programming   │ │ Database Lead │ │ QA & Change   │
│ (Assistant PM)│ │    Lead       │ │               │ │Management Lead│
└──────────────┘ └──────────────┘ └──────────────┘ └──────────────┘
```

Role	Responsibilities
Project Manager	Responsible for the completion and delivery of the project, within budget, schedule and scope. Develops the software project plan with the rest of the project team. Manages the team's performance. Responsible for the acceptance and approval of deliverables from the various stakeholders. Responsible for status reporting, risk management and unresolved escalated issues.
Testing Lead	Responsible for the management and planning of the testing phase. Work allocation to the team. Responsible for reviewing and status reporting. Review and approve of test plans. Ensure tests are conducted as planned. Maintain integrity of documentation.

Programming Lead	Responsible for the development of the system. Responsible for the performance, maintainability and availability of the system.
Database Lead	Responsible for planning and design of the data models. Responsible for the integrity of the databases.
QA & Change Management Lead	Responsible for the tracking and control mechanisms. Responsible for the quality of deliverables. Responsible in managing changes and system integrity
Business Analyst	Responsible for system integration. Responsible in liaising with various business units (stakeholders) to gather and define business requirements.

Each team member has a secondary post of a business analyst apart from their respective primary roles as assigned in the figure above.

5.2 Management Reporting and Communication

Inter team meeting is held on either every Saturday or Sunday. Apart from that, ad-hoc meetings through conference calls or internet messengers such as Microsoft MSN. Team leads will hold meetings and discuss on the development and keep the project manager updated. Any outstanding issues which cannot be resolved will be escalated to project manger for resolve. Emails between business consultants and stakeholders are archived for future references. Every Monday and Thursday, business consultants will update their respective stakeholders on the progress of their development.

6 Tracking and Control Mechanisms

6.1 Quality assurance and control

Refer to Appendix C

6.2 Change Management and control

Refer to Appendix D

Revision	Date	Created by	Short Description of Changes
1	01/01/2008	Nor Rahim	Draft
2	03/01/2008	Nor Rahim	Updated risk table

Appendix A

Planned Timeline

Appendix B

Task allocation

Appendix C

Quality Assurance Report

Appendix D

Change Management Documentation