STATEMENT OF WORK

Theatre Booking System

Eastern New Mexico University

Team Leader:

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Members:

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- Brian Elder
- Skyler Landess.

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Revision History

Name	Date	Reason For Changes	Version
Gantt	3/27/2022	The Gantt diagram has been updated	2.0

1. GENERAL INFORMATION

1.1 Introduction/Background

The theatre “Los Portales,” owned by Dr. Edgar Eduardo Ceh Varela, is a theatre in Los Portales that sells tickets in person. They want to modernize their business practices by introducing a website where their customers can see the upcoming plays, select their preferred seats and purchase tickets wherever they are.

1.2 Objectives

The objective is to build a system that will assist the theatre in making sales through the internet by allowing theatre customers to buy a seat or multiple seats through a website using their credit or debit card. The system will help organize the prices for each seat depending on their location and as the owner wishes. Additionally, it will assist in keeping track of which seats are accessible or already sold by giving the admin the option to generate a report about how many seats have been sold for a specific play and date.

1.3 Scope of Work

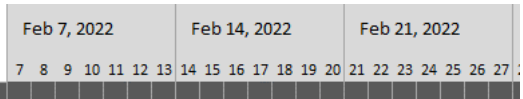
By May 2022, the development team expects a fully functioning demo of the software to be delivered to the owner of “Los Portales” theatre as a web-based system.

2. Breakdown of the Project

2.1 Gantt Chart

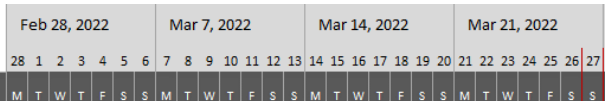
Display Week: 1

TASK	ASSIGNED TO	PROGRESS	START	END
Stage 1		100%	2/7/22	2/27/22
Discuss Program L.	Everybody	100%	2/7/22	2/9/22
Gantt diagram	Everybody	100%	2/18/22	2/26/22
Pert Diagram	Everybody	100%	2/26/22	2/27/22
CPD	Everybody	100%	2/27/22	2/27/22
Tentative cost	Everybody	100%	2/27/22	2/27/22
SRS	Everybody	100%	2/9/22	2/26/22
Use Case Diagrams	Everybody	100%	2/9/22	2/16/22
Class Diagrams	Everybody	100%	2/25/202	2/26/22
Sequence Diagrams	Everybody	100%	2/25/22	2/26/22
Upload PDFs to Github	Brian Elder	100%	2/26/22	2/27/22



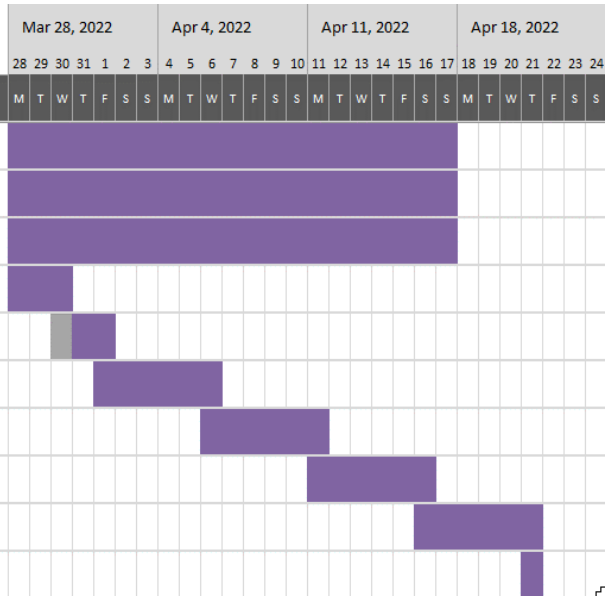
Display Week: 4

TASK	ASSIGNED TO	PROGRESS	START	END
Stage 2		100%	2/28/22	3/27/22
SDP	Everybody	100%	2/28/22	3/27/22
Setting up hosting	Damian	100%	2/28/22	2/28/22
Design Homepage	Damian	100%	3/2/22	3/9/22
Customers Authentification	Damian	100%	3/9/22	3/16/22
Component Diagrams	Everybody	100%	3/16/22	3/27/22
Update Diagrams	Everybody	100%	3/16/22	3/27/22
Upload PDF to Github	Preston	100%	3/27/22	3/27/22



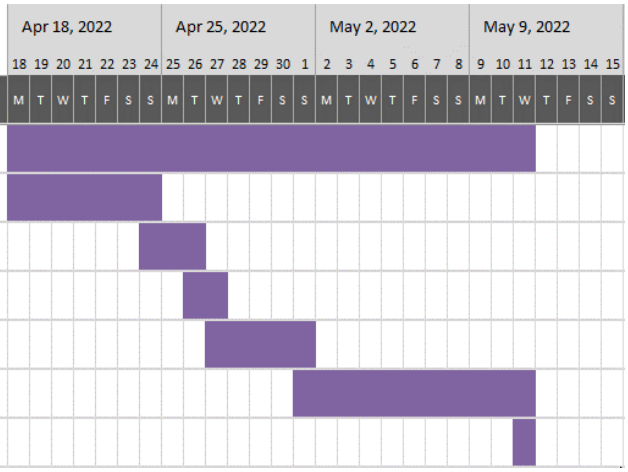
Display Week: 8

TASK	ASSIGNED TO	PROGRESS	START	END
Stage 3			3/27/22	4/17/22
STP	TBA	0%	3/28/22	4/17/22
Updated Diagrams	TBA	0%	3/28/22	4/17/22
Design Management Area	TBA	0%	3/28/22	3/30/22
Admin Authentification	TBA	50%	3/30/22	4/1/22
Code play system	TBA	0%	4/1/22	4/6/22
Code graphical seat plan	TBA	0%	4/6/22	4/11/22
Code shopping cart	TBA	0%	4/11/22	4/16/22
Code checkout	TBA	0%	4/16/22	4/21/22
Upload PDF to Github	Damian	0%	4/21/22	4/21/22

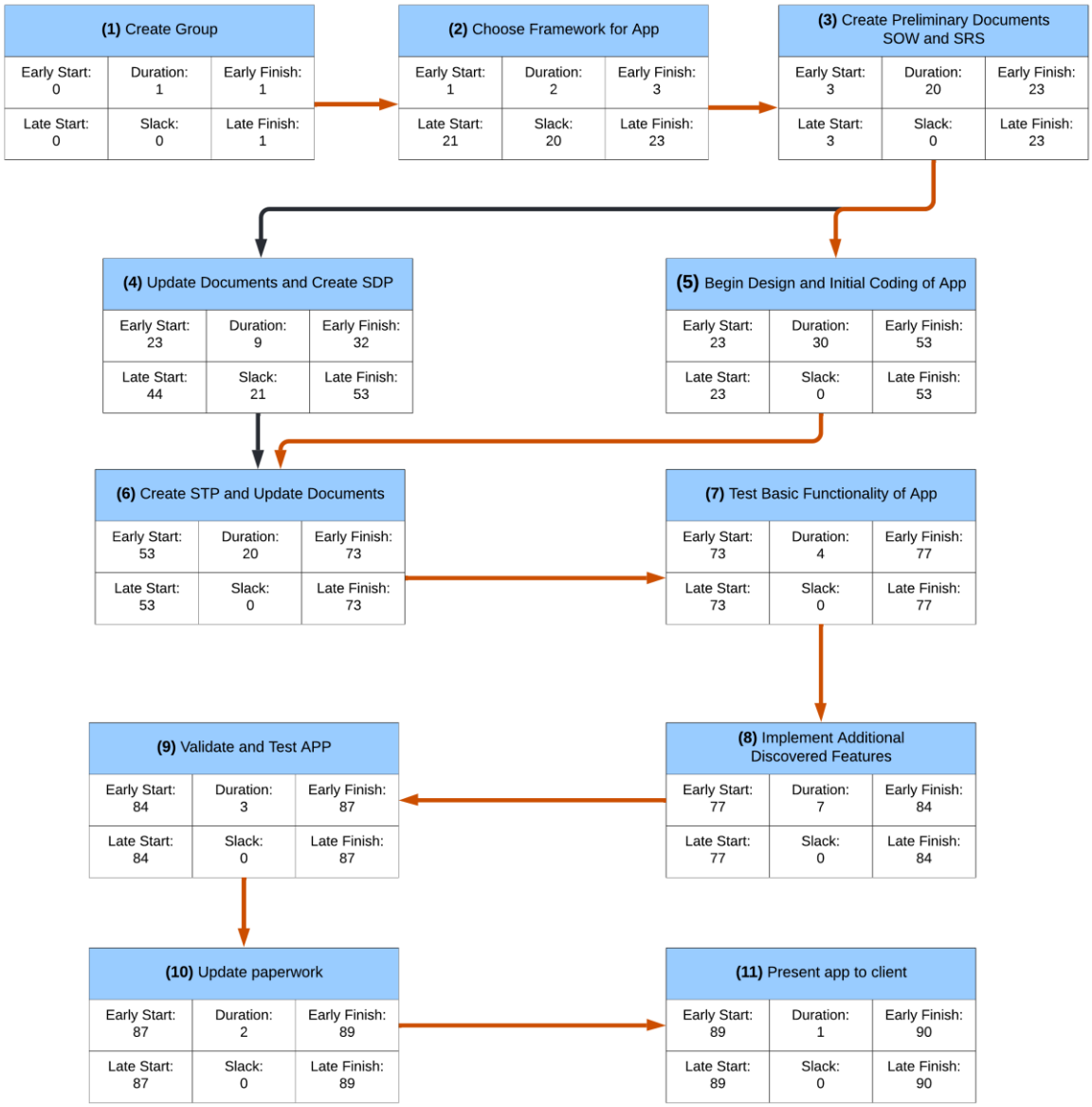


Display Week: 11

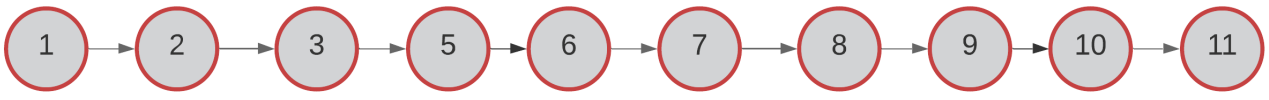
TASK	ASSIGNED TO	PROGRESS	START	END
Stage 4			4/17/22	5/11/22
Code report function	TBA	0%	4/17/22	4/24/22
Source code	TBA	0%	4/24/22	4/26/22
Execute Code	TBA	0%	4/26/22	4/27/22
Brief users manual	TBA	0%	4/27/22	5/1/22
Final Report	TBA	0%	5/1/22	5/11/22
Task 5: Present Project	Skyler	0%	5/11/22	5/11/22



2.2 PERT Diagram



2.3 Critical Path



2.4 Tentative Cost

Component	Price
Coding	$41,546.86
Hosting	$15/month/$180/year
Total for First Year	$41,726.86

The functional requirements for this software are:
1. The user can register an account on the website; EI
2. The user can log in to their account; EI
3. The user can search through plays available; EQ
4. The admin can add plays; EI
5. The admin can delete plays; EI
6. The system must generate a report showing all tickets sold; ILF
7. The user can select seats for each play; EI
8. The user can purchase seats; EI
9. The user can view previous purchases; EQ
10. The website must maintain information for plays, users, seats, and tickets in separate databases; 4 ILF
11. The website must show available seats; EO
12. The system must verify the user's payment; EIF

6 EI X 4= 24
2 EQ X 4= 8
5 ILF X 10= 50
1 EO X 5 = 5
1 EIF X 7= 7
UFP=94

Adjustment Factor	Points
Data communications	4
Distributed data processing	3
Performance	4
Heavily used configuration	0
Transaction rate	4
Online data entry	5
End-user efficiency	4
Online update	5
Complex processing	1
Reusability	1
Installation ease	1
Operational ease	4
Multiple sites	0
Facilitate change	0

VAF=36

Language	QSM SLOC/FP Data			
	Avg	Median	Low	High
ABAP (SAP) *	28	18	16	60
ASP*	51	54	15	69
Assembler *	119	98	25	320
Brio +	14	14	13	16
C *	97	99	39	333
C++ *	50	53	25	80
C# *	54	59	29	70
COBOL *	61	55	23	297
Cognos Impromptu Scripts +	47	42	30	100
Cross System Products (CSP) +	20	18	10	38
Cool:Gen/IEF *	32	24	10	82
Datastage	71	65	31	157
Excel *	209	191	131	315
Focus *	43	45	45	45
FoxPro	36	35	34	38
HTML *	34	40	14	48
J2EE *	46	49	15	67
Java *	53	53	14	134
JavaScript *	47	53	31	63

UFP=94
TDI=36

VAF = (TDI * 0.01) + 0.65;(36*0.01)+0.65=1.01
AFP=UFP*VAF; 94*1.01=94.94
47* 94.94= **4,462.18 LOC**

b) Effort = E = a(KLOC)$_b$ (person/month); 11.54079379
c) Time = T = c(E)$_d$ (months); 6.33270952
d) Average Staff Size = P = E/T (persons); 1.8224101
e) Productivity = Pr = LOC / E (LOC/person_month); 386.6441179
f) Cost = C = (E x $$_person_month) + other_costs; 11.54079379 X $3600= $41,546.86