Software Development

ID	Task Name	WBS	Duration	Start	Finish	Predecess
0	**Software Development**	**Code A**	**176 days**	**Mon 4/1/19**	**Mon 12/2/19**	
1	**Scope**	**Code AA**	**3.5 days**	**Mon 4/1/19**	**Thu 4/4/19**	
2	Determine project scope	Code AA-a	4 hrs	Mon 4/1/19	Mon 4/1/19	
3	Secure project sponsorship	Code AA-b	1 day	Mon 4/1/19	Tue 4/2/19	2
4	Define preliminary resources	Code AA-c	1 day	Tue 4/2/19	Wed 4/3/19	3
5	Secure core resources	Code AA-d	1 day	Wed 4/3/19	Thu 4/4/19	4
6	Scope complete	Code AA-e	0 days	Thu 4/4/19	Thu 4/4/19	5
7	**Analysis/Software Requirements**	**Code AB**	**14 days**	**Thu 4/4/19**	**Wed 4/24/19**	
8	Conduct needs analysis	Code AB-a	5 days	Thu 4/4/19	Thu 4/11/19	6
9	Draft preliminary software specifications	Code AB-b	3 days	Thu 4/11/19	Tue 4/16/19	8
10	Develop preliminary budget	Code AB-c	2 days	Tue 4/16/19	Thu 4/18/19	9
11	Review software specifications/budget with team	Code AB-d	4 hrs	Thu 4/18/19	Thu 4/18/19	10
12	Incorporate feedback on software specifications	Code AB-e	1 day	Fri 4/19/19	Fri 4/19/19	11
13	Develop delivery timeline	Code AB-f	1 day	Mon 4/22/19	Mon 4/22/19	12
14	Obtain approvals to proceed (concept, timeline, budget)	Code AB-g	4 hrs	Tue 4/23/19	Tue 4/23/19	13
15	Secure required resources	Code AB-h	1 day	Tue 4/23/19	Wed 4/24/19	14
16	Analysis complete	Code AB-i	0 days	Wed 4/24/19	Wed 4/24/19	15
17	**Design**	**Code AC**	**14.5 days**	**Wed 4/24/19**	**Tue 5/14/19**	
18	Review preliminary software specifications	Code AC-a	2 days	Wed 4/24/19	Fri 4/26/19	16
19	Develop functional specifications	Code AC-b	5 days	Fri 4/26/19	Fri 5/3/19	18
20	Develop prototype based on functional specifications	Code AC-c	4 days	Fri 5/3/19	Thu 5/9/19	19
21	Review functional specifications	Code AC-d	2 days	Thu 5/9/19	Mon 5/13/19	20
22	Incorporate feedback into functional specifications	Code AC-e	1 day	Mon 5/13/19	Tue 5/14/19	21
23	Obtain approval to proceed	Code AC-f	4 hrs	Tue 5/14/19	Tue 5/14/19	22
24	Design complete	Code AC-g	0 days	Tue 5/14/19	Tue 5/14/19	23
25	**Development**	**Code AD**	**81 days**	**Wed 5/15/19**	**Wed 9/4/19**	
26	Review functional specifications	Code AD-a	1 day	Wed 5/15/19	Wed 5/15/19	24
27	MDM	Code AD-b	3.33 days	Thu 5/16/19	Tue 5/21/19	26
28	Course Creation	Code AD-c	0.67 days	Tue 5/21/19	Tue 5/21/19	27
29	Course definition	Code AD-d	4 days	Wed 5/22/19	Mon 5/27/19	28
30	Course management	Code AD-e	1 day	Tue 5/28/19	Tue 5/28/19	29
31	Course Versioning	Code AD-f	1 day	Wed 5/29/19	Wed 5/29/19	30
32	Course search	Code AD-g	2 days	Thu 5/30/19	Fri 5/31/19	31
33	Create Programs	Code AD-h	1 day	Mon 6/3/19	Mon 6/3/19	32
34	Program Definition	Code AD-i	1.67 days	Tue 6/4/19	Wed 6/5/19	33
35	Program Management	Code AD-j	1 day	Wed 6/5/19	Thu 6/6/19	34
36	Program versioning	Code AD-k	0.67 days	Thu 6/6/19	Fri 6/7/19	35
37	Search Programs	Code AD-l	1.5 days	Fri 6/7/19	Mon 6/10/19	36
38	Start Proposals	Code AD-m	2 days	Mon 6/10/19	Wed 6/12/19	37
39	Proposal Collaboration	Code AD-n	1 day	Wed 6/12/19	Thu 6/13/19	38

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40	Proposal Review	Code AD-o	3.33 days	Thu 6/13/19	Wed 6/19/19	39
41	Search / Archive Proposals	Code AD-p	1 day	Wed 6/19/19	Thu 6/20/19	40
42	Course Set	Code AD-q	2 days	Thu 6/20/19	Mon 6/24/19	41
43	Define Learning Objectives	Code AD-r	1 day	Mon 6/24/19	Tue 6/25/19	42
44	Organize LO	Code AD-s	1.5 days	Tue 6/25/19	Wed 6/26/19	43
45	Attach LO	Code AD-t	1 day	Wed 6/26/19	Thu 6/27/19	44
46	Course Analysis	Code AD-u	4.5 days	Thu 6/27/19	Thu 7/4/19	45
47	Program Analysis	Code AD-v	1 day	Thu 7/4/19	Fri 7/5/19	46
48	Print / Export / Notifications	Code AD-w	0.83 days	Fri 7/5/19	Fri 7/5/19	47
49	Backend services	Code AD-x	12 days	Mon 7/8/19	Tue 7/23/19	48
50	Configurations	Code AD-y	6 days	Wed 7/24/19	Wed 7/31/19	49
51	Accredition	Code AD-z	6.67 days	Thu 8/1/19	Fri 8/9/19	50
52	SSO / API Integration / Bilingual	Code AD-aa	15.67 days	Fri 8/9/19	Mon 9/2/19	51
53	System Features	Code AD-ab	2.67 days	Mon 9/2/19	Wed 9/4/19	52
54	Development complete	Code AD-ac	0 days	Wed 9/4/19	Wed 9/4/19	53
55	**Testing**	**Code AE**	**49 days**	**Thu 9/5/19**	**Tue 11/12/19**	
56	Develop unit test plans using product specifications	Code AE-a	2 days	Thu 9/5/19	Fri 9/6/19	54
57	Develop integration test plans using product specifications	Code AE-b	2 days	Mon 9/9/19	Tue 9/10/19	56
58	**Functional Testing**	**Code AE-c**	**25.5 days**	**Wed 9/11/19**	**Wed 10/16/19**	
59	Review modular code	Code AE-c.1	2.5 days	Wed 9/11/19	Fri 9/13/19	57
60	Test component modules to product specifications	Code AE-c.2	5 days	Fri 9/13/19	Fri 9/20/19	59
61	Identify anomalies to product specifications	Code AE-c.3	5 days	Fri 9/20/19	Fri 9/27/19	60
62	Modify code	Code AE-c.4	10 days	Fri 9/27/19	Fri 10/11/19	61
63	Re-test modified code	Code AE-c.5	3 days	Fri 10/11/19	Wed 10/16/19	62
64	Unit testing complete	Code AE-c.6	0 days	Wed 10/16/19	Wed 10/16/19	63
65	**Integration Testing**	**Code AE-d**	**19.5 days**	**Wed 10/16/19**	**Tue 11/12/19**	
66	Test module integration	Code AE-d.1	5.5 days	Wed 10/16/19	Wed 10/23/19	64
67	Identify anomalies to specifications	Code AE-d.2	6 days	Thu 10/24/19	Thu 10/31/19	66
68	Modify code	Code AE-d.3	3 days	Fri 11/1/19	Tue 11/5/19	67
69	Re-test modified code	Code AE-d.4	5 days	Wed 11/6/19	Tue 11/12/19	68
70	Integration testing complete	Code AE-d.5	0 days	Tue 11/12/19	Tue 11/12/19	69
71	**Training**	**Code AF**	**12 days**	**Wed 11/13/19**	**Thu 11/28/19**	
72	Develop training specifications for end users	Code AF-a	2 days	Wed 11/13/19	Thu 11/14/19	70
73	Develop training specifications for helpdesk support staff	Code AF-b	2 days	Fri 11/15/19	Mon 11/18/19	72
74	Develop training materials	Code AF-d	2 days	Tue 11/19/19	Wed 11/20/19	73
75	Conduct training usability study	Code AF-e	2 days	Thu 11/21/19	Fri 11/22/19	74
76	Finalize training materials	Code AF-f	2 days	Mon 11/25/19	Tue 11/26/19	75
77	Develop training delivery mechanism	Code AF-g	2 days	Wed 11/27/19	Thu 11/28/19	76

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78	Training materials complete	Code AF-h	0 days	Thu 11/28/19	Thu 11/28/19	77
79	**Documentation**	**Code AG**	**139 days**	**Wed 5/15/19**	**Mon 11/25/19**	
80	Develop Help specification	Code AG-a	1 day	Wed 11/13/19	Wed 11/13/19	55
81	Develop Help system	Code AG-b	3 days	Thu 11/14/19	Mon 11/18/19	80
82	Review Help documentation	Code AG-c	3 days	Tue 11/19/19	Thu 11/21/19	81
83	Incorporate Help documentation feedback	Code AG-d	2 days	Fri 11/22/19	Mon 11/25/19	82
84	Develop user manuals specifications	Code AG-e	2 days	Wed 5/15/19	Thu 5/16/19	24
85	Develop user manuals	Code AG-f	3 wks	Fri 5/17/19	Thu 6/6/19	84
86	Review all user documentation	Code AG-g	2 days	Fri 6/7/19	Mon 6/10/19	85
87	Incorporate user documentation feedback	Code AG-h	2 days	Tue 6/11/19	Wed 6/12/19	86
88	Documentation complete	Code AG-i	0 days	Wed 6/12/19	Wed 6/12/19	87
89	**Pilot**	**Code AH**	**7 days**	**Wed 11/13/19**	**Thu 11/21/19**	
90	Identify test group	Code AH-a	1 day	Wed 11/13/19	Wed 11/13/19	70
91	Develop software delivery mechanism	Code AH-b	1 day	Thu 11/14/19	Thu 11/14/19	90
92	Install/deploy software	Code AH-c	1 day	Fri 11/15/19	Fri 11/15/19	91
93	Obtain user feedback	Code AH-d	3 days	Mon 11/18/19	Wed 11/20/19	92
94	Evaluate testing information	Code AH-e	1 day	Thu 11/21/19	Thu 11/21/19	93
95	Pilot complete	Code AH-f	0 days	Thu 11/21/19	Thu 11/21/19	94
96	**Deployment**	**Code AI**	**4 days**	**Fri 11/22/19**	**Wed 11/27/19**	
97	Develop deployment methodology	Code AI-b	1 day	Fri 11/22/19	Fri 11/22/19	95
98	Secure deployment resources	Code AI-c	1 day	Mon 11/25/19	Mon 11/25/19	97
99	Train support staff	Code AI-d	1 day	Tue 11/26/19	Tue 11/26/19	98
100	Deploy software	Code AI-e	1 day	Wed 11/27/19	Wed 11/27/19	99
101	Deployment complete	Code AI-f	0 days	Wed 11/27/19	Wed 11/27/19	100
102	**Post Implementation Review**	**Code AJ**	**3 days**	**Thu 11/28/19**	**Mon 12/2/19**	
103	Document lessons learned	Code AJ-a	1 day	Thu 11/28/19	Thu 11/28/19	101
104	Distribute to team members	Code AJ-b	1 day	Fri 11/29/19	Fri 11/29/19	103
105	Create software maintenance t	Code AJ-c	1 day	Mon 12/2/19	Mon 12/2/19	104
106	Post implementation review co	Code AJ-d	0 days	Mon 12/2/19	Mon 12/2/19	105