Timeline

#	Task Name	Task Description	Duration/Frequency	Start	ETA
1 Project Initiation			1 week	11-19-2020	11-26-2020
1.1	Form Team	Form a team of size two from the students in the class	1 week	11-19-2020	11-26-2020
1.2	Identify Stakeholders	Check who is grading the work	1 week	11-19-2020	11-26-2020
1.3	Write Project Charter	Define the goal of the project in text form	1 week	11-19-2020	11-26-2020
2 Planning			2 weeks	11-26-2020	12-10-2020
2.1	Create Project Plan	Create a document planning the structure of the project	1 week	11-26-2020	12-03-2020
2.1.1	Define Requirements	List the requirements, their interdependencies and constraints	2 days	11-26-2020	11-27-2020
2.1.2	Define Scope	Write a scope statement. What is included in the project? What is excluded?	2 days	11-26-2020	11-27-2020
2.1.3	Create Schedule	List, sequence and assign work packages	3 days	11-30-2020	12-03-2020
2.1.4	Define Quality	Define quality standards in the dimensions performance and code quality	1 week	11-26-2020	12-03-2020
2.1.5	Manage Communications	Setup version control and regular communications channels	1 week	11-26-2020	12-03-2020
2.2	Define Software Stack	Come to an agreement on what software is used for which components and how they intersect.	1 week	12-03-2020	12-10-2020
2.2.1	Test Alternatives	Test out alternatives for each software component.	1 week	12-03-2020	12-10-2020
3 Execution			1 week	12-10-2020	01-28-2021
3.1	Implement Key Expansion	Imlementation of the key schedule in the AES Algorithm	1 week	12-10-2020	12-17-2020
3.1.1	Compute Round Constants	Write code that computes the round constants used in the G function of the key schedule.	1 week	12-10-2020	12-17-2020
3.1.2	Compute SBox	Write function that computes the SBOX lookup table.	1 week	12-10-2020	12-17-2020
3.2	Implement Encryption	Implement the encryption functionality with a given input and key	3 weeks	12-17-2020	01-14-2021
3.2.1	Implement Round	Write functions for each part of an encryption round in AES. (Byte Subsitution, ShiftsRows, Mix Columns, Add-Key)	3 weeks	12-17-2020	01-14-2021
3.2.2	Documentation	Document all functions written in 3.2.	3 weeks	12-17-2020	01-14-2021
3.3	Implement Decryption	Implement the decryption functionality with a given input and key	3 weeks	12-17-2020	01-14-2021
3.3.1	Implement Round	Write functions for each part of a decryption round in AES. (inverse Add-Key, inverse MixColumns, inverse ShiftRows, inverse ByteSub)	3 weeks	12-17-2020	01-14-2021
3.3.2	Documentation	Document all functions written in 3.3	3 weeks	12-17-2020	01-14-2021
3.4	Implement Interfaces	Implement the interface code between components from 3.1, 3.2 and 3.3	2 weeks	01-14-2021	01-28-2021
4 Monitoring			continuous	-	-
4.1	Present Progress	Prepare and hold regular progress presentations	biweekly	-	-
4.2	Validate Scope	Validate that all WPs are in scope. Monitor scope creep.	weekly	-	-
4.3	Verify Requirements	Verify that WPs meet the requirements.	weekly	-	-
4.4	Validate Quality	Validate the performance and code quality of WPs	weekly	-	-
5 Closing			1 week	01-28-2021	02.04.2021
5.1	Deliver Software	Deliver the final code files in one archive	1 week	01-28-2021	02.04.2021
5.2	Deliver Documentation	Deliver the written thesis and documentations digitally and in print	1 week	01-28-2021	02.04.2021
5.3	Demonstrate Software	Prepare and hold a demonstration of the software	single day	02.04.2021	02.04.2021
5.4	Present Final Result	Present the functionaly and code to the stakeholders	single day	02.04.2021	02.04.2021

Timeline columns: 11.19 - 11.26 | 11.26 - 12.03 | 12.03- 12.10 | 12.10 - 12.17 | 12.17. - 12.24. | Break | 12.31. - 01.07. | 01.07 - 01.14. | 01.14. - 01.21. | 01.21. - 01.28. | 01.28. - 02.04. | 02.05