



Senior Project

Software Application of Security study (SAFSS)



INTRODUCTION:

HAVE YOU EVER WONDERED HOW STRONG YOUR PASSWORD IS? DO YOU TIRE OF CREATING NEW PASSWORDS FOR YOURSELF? YOU WANT TO PROTECT YOUR DATA WITHOUT WORRYING ABOUT SOMEONE CAN SNEAK INTO YOUR COMPUTER AND STEAL YOUR DATA. IT IS TIME TO CHECK OUT SAFSS. THE SOFTWARE CAN HELP YOU CHECK YOUR PASSWORD STRENGTH AND GIVE YOU A STRONG PASSWORD AS YOUR LENGTH DESIRE. THE BEST PART IS IT CAN ENCRYPT AND DECRYPT YOUR FILES, SO NO ONE CAN GET ACCESS TO YOUR DATA BESIDES YOU.



EVALUATION:

OVERALL, THIS IS A SELF-DEVELOP SOFTWARE WHEN THERE ARE NOT TOO MANY FEATURE ARE ADDED. THE PROJECT IS BUILT BASED ON CREATED MODULE WHICH IS AIM FOR INDIVIDUAL USER. HOWEVER, SAFSS GAINS SOME BASIC PROJECT AND COMPLETION WITH GIVEN TASKS. PROJECT COVER AND COMPLETE THE BASIC OF CAESAR CIPHER FUNCTION FOR FILES, PASSWORD GENERATOR AND STRENGTH CHECKING. THIS IS THE FIRST VERSION OF SAFSS WITH THREE BASIC FUNCTION. THERE ARE MANY MORE AREA THAT CAN BE DEVELOP IN THE FUTURE.

IMPLEMENTATION:

THE SAFSS STANDS FOR SOFTWARE APPLICATION FOR SECURITY STUDY. THE APPLICATION IS BASED ON CRYPTOGRAPHY THAT PROVIDES AN ENCRYPTION FUNCTION AND DECRYPTION FUNCTION (MAIN FUNCTION). THE SYSTEM ALSO PROVIDES 2 OTHER FUNCTIONS PASSWORD GENERATOR AND PASSWORD STRENGTH CHECKING.

CAESAR CIPHER: THIS FUNCTION WILL BE BUILT ON CREATED MODULES TO ENCRYPT AND DECRYPT FILES WITH RANDOM KEYS. THE FILE THEN WILL BE DOWNLOADED AND SAVED INSIDE THE USER'S COMPUTER. IN ORDER TO OPEN AND USE AN ENCRYPTED FILE, THE USER MUST DECRYPT THE FILE BEFORE USE. IT WILL TAKE TIME AND WORK TO DO IN ORDER TO KEEP YOUR FILE PRIVATE. TO ENCRYPT OR DECRYPT, THE USER NEEDS TO UPLOAD THEIR FILES. THE FILE WILL BE OPEN TO REWRITING THE ENCRYPTED DATA. TO DECRYPT THE FILE, THE PROCESS WILL BE THE SAME AS THE ENCRYPTED PROCESS, BUT THE SYSTEM WILL REWRITE THE FILE TO THE ORIGINAL FILE. THE KEY WILL BE STORED AS A FILE INSIDE THE SYSTEM, THE USER ALSO MUST UPLOAD THE KEY FILE TO CONVERSE BACK TO THE ORIGINAL DATA.

PASSWORD GENERATOR: FUNCTION IS BUILT TO GIVE OUT A SECURE AND STRONG PASSWORD. THE SYSTEM WILL GENERATE A RANDOM PASSWORD THAT CONTAINS A COMBINATION OF UPPER CASE, LOWER CASE, DIGITS, AND PUNCTUATION. HOWEVER, LENGTH IS STILL BASED ON USER DESIRE. AFTER GENERATING A PASSWORD, THE SYSTEM WILL CHECK IF THE PASSWORD IS VALID OR NOT IN ORDER TO CONVINCE THE USER TO REGENERATE THE PASSWORD. THE CRITIC OF THIS FUNCTION WILL NOT THAT DETAIL WHEN COMPARING WITH PASSWORD STRENGTH CHECKING.

PASSWORD CHECKING: A FUNCTION THAT WILL LET YOU KNOW IN DETAIL HOW STRONG YOUR PASSWORD IS. PASSWORD WILL BE CHECKED ORDERLY ON LENGTH AND NUMBER OF CHARACTERS INCLUDING UPPERCASE, LOWERCASE, DIGITS, AND PUNCTUATION. DURING THE CHECKING PROCESS, A SCORE WILL BE APPLIED TO GRADE YOUR PASSWORD WHEN THE PROCESS IS COMPLETED WITH A SCORE CHART: WEAK (<9), MEDIUM(<13), STRONG (<16), EXCELLENT (>=17). PASSWORD WILL BE DETERMINED WEAK AND SHORT WITH A SCORE OF 0 WHEN THE PASSWORD IS AMONG IN ROCKYOU FILE.

CONCLUSION:

IN GENERAL, SAFSS IS A SELF-ENCRYPTED SOFTWARE THAT USES CRYPTOGRAPHY TO ENCRYPT AND DECRYPT WHOLE FILES IN ORDER TO PREVENT UNAUTHORIZED ACCESS TO DIGITAL INFORMATION. THE FUNCTION WILL PROVIDE KEY WITHIN ENCRYPTED FILES AND DOWNLOAD FILE TO USER'S COMPUTER. WHEN YOU NEED TO OPEN THE FILE, JUST DECRYPTED THE FILE THAT SYSTEM PROVIDES. BESIDE ENCRYPTION AND DECRYPTION, SAFASS ALSO PROVIDE PASSWORD GENERATOR AND PASSWORD STRENGTH CHECKING. IT WILL BE HELPFUL FOR PERSON WHO CHANGE THEIR PASSWORD FREQUENTLY OR WANT TO HAVE STRONG PASSWORD. ALSO, TO HELP CHECK HOW STRONG YOUR PASSWORD. STRONG PASSWORD IS ONE OF AMONG WAYS TO PROTECT YOURSELF ONLINE.