Question 3 (25 marks)

a. Briefly explain the significant of using function prototypes in C Programming Language.

b. Differentiate between the following
   i. Boiler piates and user functions **(2 marks)**
   ii. External storage class and Static storage class **(4 marks)**

c. List two drawbacks in using register storage class in C Programming Language **(4 marks)**

d. Write a program which takes two parameters from the user. The first parameter will be a string value of variable **name** and the second is an integer value for a variable **choice**. If choice is 1 the program should call a function which will return the name in lower case. If choice is 2 the program should call a function which will return the name in upper case. If choice is 3 the program should call a function which will return the name in reverse order. When the choice is not between 1 and 3 the program should display "*wrong choice*" to the user. **(15 marks)**

Question 4 (25 marks)

a. With example describe two ways a union can be declared. **(4 marks)**

b. Differentiate between the following: **(6 marks)**
   i. An array and a union
   ii. A union and a structure

c. Write a program which will implement the bank account scenario. Your account program should implement the following functions **createAccount, checkBalance, deposit, withdraw** and **transfer.** The users will operate your program through the menu option 1-5 with each choice pointing to one of the functions above. **Note** use union to store data in your program **(15 marks)**

Question 5 (25 marks)

a. Differentiate between the following. **(6 marks)**
   i. Text file and Binary file
   ii. Read mode and write mode
   iii. Write mode and append mode

b. Write a code fragment which will open a file named "IS136.txt" and insert a string "This is IS Semester Imekwisha" 15 bytes from the beginning of the file. The code fragment should check if the file exists before opening it. **(6 marks)**

c. Write a program which does the following: **(13 marks)**
   i. Accepts 50 bank customers' records from the keyboard. Each record should contain the attributes; Surname, First Name, Account Number, Principle, Time.
   ii. The program should compute the Interest for each record entered. (I =PRT/100 and R = 5)
   iii. The program should also write these records into a text file named "Interest.txt".