Assignment No.10

Title : File organisation

Aim :- To learn & implement the sequential file to maintain student information.

Problem statement : Depaetment maintain a student information. The file contain roll no, name, division, address allow use to delete, add, information of student. Display information of student. display info of paeticulae employe if record not exist appropriate message should be displayed. if it exist system displays Student's details sequential file to mainta the data.

objective : i) To learn the basic concepts regarding sequentia file using c++
ii) To learn the way to implement the differen operation on file.

Theoey :

File organisation - File organisation refers to the relationsh of key reffeed to the physical location that reffeed in the computee file.

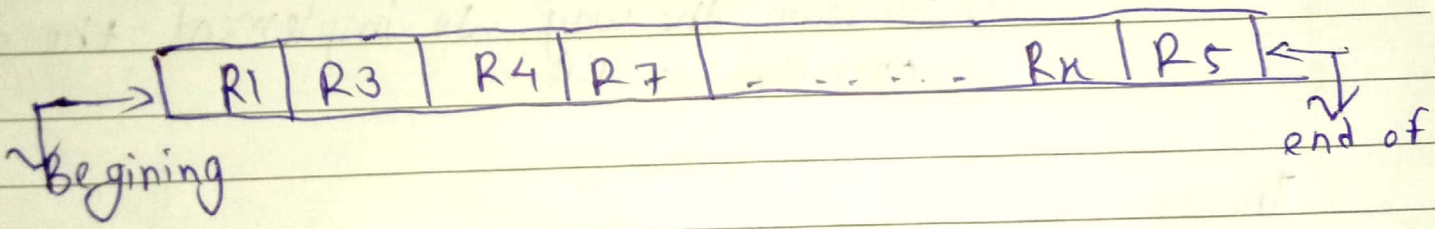
There aee various method of file organisation. sequential file organisation is one of the way to handle file.

- Sequential file organisation:-

It is one of the simple method of the file organization here each file record one stored one after the other in sequential manner.
Records are stored one after the other as they are inserted into the tables. This method is called file method.

when new record is inserted. it is placed at the end of the file in the case of any modification as deletion of record, record will be searched in the memory block.

once it is persent it will marked for deleting & new blank of record is entered.



Operation:-

i) Insertion:- It refers to new record to be inserted at end of file.

ii) Deletion:- we have to search the record while file is not reached end if it is found the delete record.

iii) Seaech :- Seaech the record into the file until it reached the end of file. it return true if seaech successful otherwise false.

iv) append :- we try to inseet new record at the end of file, it refers to append.
ios::app mode should be file opening mode.

- file functions :-

i) open() :- It required file name to be opened & file opening mode like ios::app, ios::in, ios::out .... etc.

ii) write() :- It is used to write object into the file.

iii) Read() :- It is used to Read object from the file.

iv) close() :- It is used to close file.

- Algorithms :-

i) Create :-

step 1:) Open file using File pointer in writing mode.

step 2:) do while staets until user wants to entee new records.

2.1) getdata() of student information from the user
2.2) write object to file using file write() function.

end do while

step 3:) close the file.

2) Append :-

step 1:) Staet
step 2:) Open the file using file pointee in append mode.
step 3:) do while starts until user wants to entee new records.

3.1) getdata of student information from the user.
3.2) write object to file using write function

end do while
step 4:) END

3) Display :-

step 1:) staet
step 2:) open the file using file pointee in reading mode.
step 3:) while file pointee is reached to end of file
staets reading from file through (read() function

end while

step 4.) if (file pointer != eof)
print data i.e. putdata()
end if

step 5:) close the file

4) Seaech :-

step 1:) start
step 2:) set flag = 0
step 3:) Take i/p of record to be seaeched say x
step 4:) open file in reading mode
step 5:) while (FP != eof())
5.1.) read from the file
5.2.) if file record matched
set flag = 1
break
end if
end while
step 6:) if (flag == 1)
found
else
Not found
step 7:) END

5) update -

step 1:) start
step 2:) open file in read mode
step 3:) while (fp! = eof())
3.1 read from the file
3.2 check data to updated is matchud, if it is true
3.2.1 get new updated data from user
3.2.2 update information (write object to file)
else
continue
end while

step 4:) close the file
step 5:) end.

6) Delete :

step1:) staet
Step 2:) open the file in read mode
step 3:) while (FP! = eof())
3.1 read from the file
3.2 check data to be deleted is matchud, if it is true
continue;
else
stor that record in new file
end while
Step 4:) Rename new file with 1st file
step 5:) close the file
step 6:) END

- Application :

i) Retrieval of record becomes efficient if the query uses the sorting attribute as search key.
ii) Sorting of records on ordering field is fast.
iii) It contains fast & efficient method for huge amount of data.
iv) This method is used for report generation or statistical calculations.

- Conclusion :

i) Sequential file organisation is used when most of record have to be accessed like grade calculation of student, generating the salary slip .... etc.
ii) It is simple design. It requires no much effort to store data.