

DBMS DESIGN

CSC3170 FINAL PROJECT – OPTION 3

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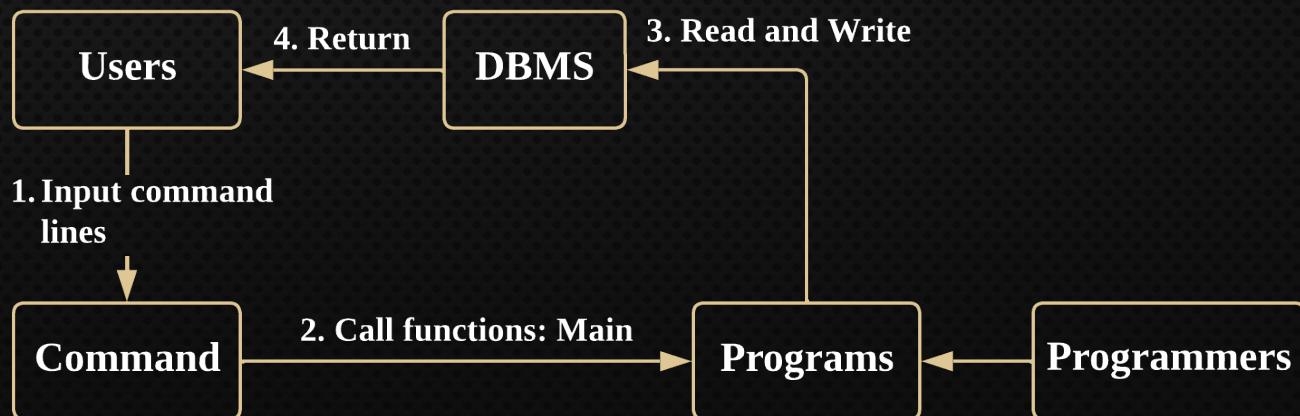
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CONTENT

- Background of DBMS
- Brief task description
- Test result
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- Job division

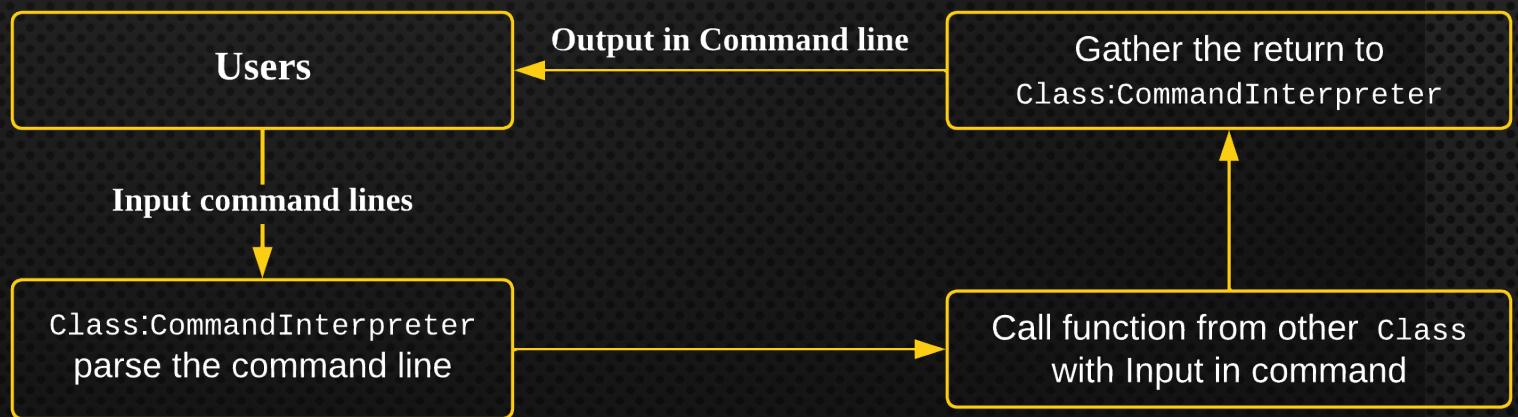
BACKGROUND OF DBMS

- Database Management System
- To manage information, store tables with rows and columns
- Core functionalities
 - Data storage
 - Data retrieval
 - Data update



BRIEF TASK DESCRIPTION

- Design Overview
 - Command interpretation
 - Functions
 - Create a table
 - Load table from file
 - Store data into a table
 - Insert a new row to a table
 - Print a table
 - Select certain data from a table
 - Test cases
- Function implementation
 - Database – HashMap: *names of tables* (keys) and *table objects* (values)



TEST RESULT

```
/Library/Developer/CommandLineTools/usr/bin/make -C testing check
Testing application db61b.Main...
** test1 PASSED.
** test2 PASSED.

Passed all 2 tests.
```

ADDITIONAL COMMAND SUPPORT FOR ASSIGNMENT 2

- Additional functions
 - order by
 - Inner join (natural join)
 - table multiplication

ADDITIONAL COMMAND SUPPORT FOR ASSIGNMENT 2

- Additional functions
 - order by

```
Windows PowerShell
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```

```
Try the new cross-platform PowerShell https://aka.ms/pscore6
```

```
PS C:\Users\Jefferson\github-classroom\CSC3170-2022Fall\project-team-4> & 'C:\Program Files\Java\jdk-18.0.1.1\bin\java.exe' '@C:\Users\JEFFER~1\AppData\Local\Temp\cp_avst4uvewwyitcuu76x5pd0p.argfile' 'db61b.Main'
DB61B System. Version 2.0.
> load employees;
Loaded employees.db
> select EMPLOYEE_ID,SALARY from employees orderby SALARY asc;
Sort is called
Search results:
132 2100.00
128 2200.00
136 2200.00
135 2400.00
127 2400.00
131 2500.00
```

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```
PS C:\Users\Jefferson\github-classroom\CSC3170-2022Fall\project-team-4> & 'c:\Program Files\Java\jdk-18.0.1.1\bin\java.exe' '@C:\Users\JEFFER~1\AppData\Local\Temp\cp_avst4uvewwyitcuu76x5pd0p.argfile' 'db61b.Main'
DB61B System. Version 2.0.
> load employees;
Loaded employees.db
> select EMPLOYEE_ID,PHONE_NUMBER from employees where DEPARTMENT_ID = '100';
Search results:
108 515.124.4569
109 515.124.4169
110 515.124.4269
111 515.124.4369
112 515.124.4469
113 515.124.4567
> select EMPLOYEE_ID,PHONE_NUMBER from employees where DEPARTMENT_ID = '20';
Search results:
201 515.123.5555
202 603.123.6666
```

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```
PS C:\Users\Jefferson\github-classroom\CSC3170-2022Fall\project-team-4> & 'C:\Program Files\Java\jdk-18.0.1.1\bin\java.exe' '@C:\Users\JEFFER~1\AppData\Local\Temp\cp_avst4uvewwyitcuu76x5pd0p.argfile' 'db61b.Main'
DB61B System. Version 2.0.
> load departments;load employees;
Loaded departments.db
Loaded employees.db
> multiply departments,employees as dept_emp;
Successfully multiplied tables
> select DEPARTMENT_ID,DEPARTMENT_NAME,FIRST_NAME from dept_emp where MANAGER_ID = EMPLOYEE_ID;
Search results:
 10 Administration Jennifer
 20 Marketing Michael
 30 Purchasing Den
 40 HumanResources Susan
```

ADDITIONAL COMMAND SUPPORT FOR ASSIGNMENT 2

- [Video](#)

GUI IMPLEMENTATION

- [Video](#)

JOB DIVISION

- Complete the part of UBC: Shao Jiaqi, Zhang Tianqi, Zhang Qihang
- Implementation of A2: Jefferon Tedjojuwono
- GUI: Wang Jingyi
- Report: Shao Jiaqi, Zhang Tianqi, Zhang Qihang
- Presentation: Chen Nuohan

CONCLUSION

- Implementation of DBMS
 - Command line
 - Extra work – Assignment 2
 - Extra work – GUI

THANK YOU