

EXPERIMENT - 9

IMPLEMENTING EXCEPTION HANDLING AND GARBAGE COLLECTIONS IN C++ AND JAVA

[TRY / CATCH BLOCK]

THE "try-catch" BLOCK IS USED TO HANDLE EXCEPTIONS THAT MAY OCCUR DURING PROGRAM EXECUTION.

IT ALLOWS YOU TO CATCH EXCEPTIONS, HANDLE THEM AS REQUIRED AND CONTINUE OR STOP THE PROGRAM BASED ON THE ERROR.

SYNTAX:

```
try {  
    // CODE THAT MIGHT  
    // FAIL OR RAISE EXCEPTION  
} catch (Exception-Type obj) {  
    // DEAL WITH EXCEPTION  
}
```

"try" CONTAINS BLOCK OF CODE THAT MIGHT THROW AN EXCEPTION DURING RUNTIME, THEN REST OF THE BLOCK IS SKIP

"catch" BLOCK HANDLES THE EXCEPTION, YOU CAN MULTIPLE "catch" BLOCKS ACCORDING TO THE EXCEPTION RAISED IN THE "try" BLOCK.

NXT Pg

[How GARBAGE COLLECTION IS IMPLEMENTED]

GARBAGE COLLECTION IS A FORM OF AUTOMATIC MEMORY MANAGEMENT IN MANY PROGRAMMING, LIKE JAVA & PYTHON.

IF OR WHEN AN OBJECT OR VARIABLE IS NO LONGER NEEDED BY PROGRAM OR GOES OUT OF SCOPE THE PROGRAM FREES UP THE SPACE PREVENTING LEAKS.

IN C++, IT NEEDS TO BE DONE MANUALLY VIA "delete" OR "free()".

[CONCLUSION]

WHAT WAS PERFORMED:
IMPLEMENTED EXCEPTION HANDLING AND GARBAGE COLLECTION IN JAVA AND C++

TOOLS USED:
VS CODE, BASH, JDK

WHAT WAS OBTAINED:
SUCCESSFULLY DEMONSTRATED THE USE OF EXCEPTION HANDLING AND GARBAGE COLLECTION IN JAVA AND C++