

# Cool Java Intelligent Development Kit for Java

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**Abstract:** Cool Java is an Intelligent Development Environment kit for JAVA language .It is developed using JavaScript. We can upload it as online web application. The basic idea is instead of making the user to type all the lines of program, let them to design the output of applet program. so the corresponding coding will get generated .Cool java reduces the typing work up to 95%.Cool java focus on typing reduction but the compilation area is separate which is standard JDK compiler . Most of the compilers are strong in compilation side but not in editing side. (i.e.) we have to type the entire program by manually unreasonably it takes too much of time. This means typing time is more than thinking time. To reduce the typing time and also to reduce the errors we require one solution. Our Cool Java is designed based on the error reduction and less time consumption concept. Cool java removes logical errors and syntax errors before submitting the program to the compiler.

## I. INTRODUCTION

Java can be used to create two types of programs: applications and applets. An application created by java is more or less like one created using C or C++. This programs starts up with class or import statements. But an applet is an intelligent program that can react to user input and dynamically change [1]. This applet programs are mainly used in mobile applications mostly in android.

### A. Remote Awt Classes

The Abstract Window Toolkit (AWT) is the standard API for implementing graphical user interfaces (GUI) in Java programs. The AWT contains classes for user input and output devices, including buttons, choice boxes, text fields, images, and a variety of types of windows, to name a few. Virtually every Java applet interacts with the user by Instantiating AWT classes and invoking the methods of the objects so created. The intuitive goal of the graphics server is to provide versions of the AWT Classes whose instances can be created and manipulated from the playground [4]. For example, the graphics server should enable a program, running on the playground, to create a dialog window in the user's browser, display it to the user, and be informed when the user clicks the "ok" button [4]. Likewise by designing the graphics in our IDE will generate a code for this AWT.

We implemented our IDE based on the error reduction and to bring the concept of graphics designing than typing the program. The errors we remove from the source program as follows:

- Compile time errors
- Run time errors
- Logical errors

## II. COMPILE TIME ERRORS

At compile time, when the code does not comply with the Java syntactic and semantics rules, compile-time errors will occur. The goal of the compiler is to ensure the code is compliant with these rules. Any rule-violations detected at this stage are reported as compilation errors. These are also the result of not typing the program correctly.

### A. Class or interface expected

When the class program syntax incorrect with missing braces in class part this error will occur .In Cool java when the user start typing the class this will automatically adds the syntax of the class program .So there is no chance for missing the braces in class part.

### B. Cannot find symbol

If the compiler cannot find the identifiers used in the program. This will automatically checks for the identifiers in the program and replace them with correct spelling of identifiers and in smaller case.

### C. Package not found in import

When the import statement program doesn't include the required import package this type of error will occur. In cool java when the user types an import program it will automatically adds the required import packages for java.



**D. Missing '}' brackets**

If '{' is found then Cool java will automatically adds '}' as a next character.

**E. Cannot find method**

These are the errors mostly occurred in Applet program it is possible in two cases:

**F. Name Not Found**

If the name of the method misspelled this error will occur .In our cool java there is no chance for this error when the user decide which image is to be drawn in the applet designer will automatically paste the corresponding name of method with correct spelling.

**G. Too Many Arguments**

If the arguments passed to the method are too large then this error will occur. In our cool java based on the user designing the correct arguments are get added in the program by detecting the methods.

**III. RUN TIME ERRORS**

When the code compiles without any error, there is still chance that the code will fail at run time. The errors only occurs at run time are call run time errors.

**A. Exception in thread "main"**

When the class name is not same as the Program name this error will occur .In our Cool java after typing the program while saving it will check for the class name and program name if it matches it will save else it won't allow the user to save .so there is no chance for this type of exception in our program.

**B. Applet Not Initialized**

When the user typing a program using Textbox, label, button etc., the program must contain init() if it is missing then this error will occur. In our cool java when the user start designing the application program using those tools, it will automatically detects the type of program and it will add the init() syntax inside the program.

**C. Path not found**

When the user doesn't know the path to Run java program in the compiler this error will occur. In our cool java when the user click the compile option it will automatically sets the path in that compiler

**IV. LOGICAL ERRORS**

Besides syntax errors, a second kind of error occurs when the syntax of the program is correct and the program compiles but produces incorrect results when you execute it. This type of error is logical error. Which is often more Copyright to IJARCCCE

difficult to find and resolve. But in our cool java we tried to resolve some of the basic logical errors as follows.

**A. Coordinates Are Too Big**

This logical error is solved while designing the applet in the applet designer it will not allow to extent. When it reaches the maximum value for that window it just stops its dynamic updating.

**V. SOME OF THE SNAPSHOTS OF OUR COOL JAVA**

**A. Main Page**

This page includes all the facilities like creating a new file, opening, closing, saving, and to make the typing area in a colourful manner according to user option .This cool java includes help line animation option where the beginners for this cool java can view the working procedure in that animation this is created using the "Photoshop CS5".

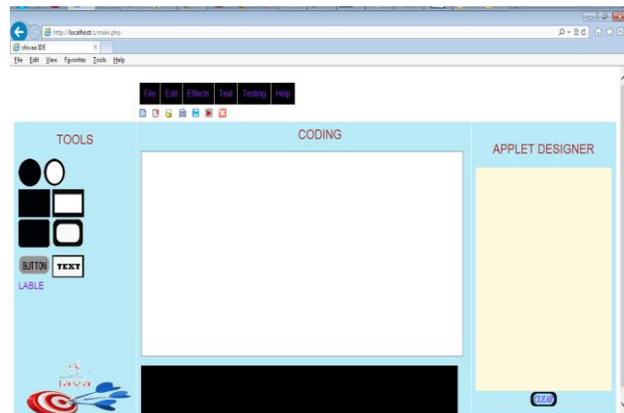


Fig 1: The page where the user can program

When the user clicks the open option then it will automatically open the JDK BIN folder where the java files are to be located. Then on click the file and open the corresponding file text are pasted inside the user typing area and that is shown in fig2.,

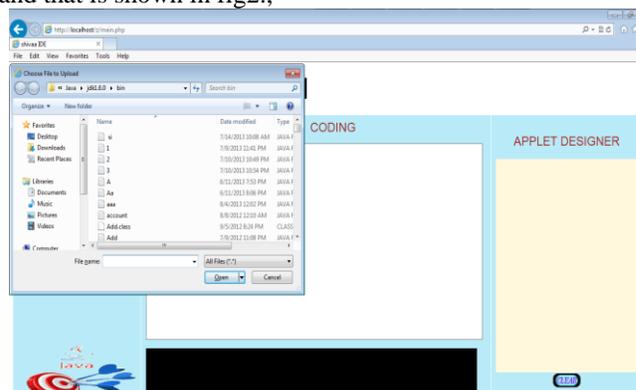


Fig2: To open an existing file from our system



When the user clicks the save as option in our cool java it will shows the dialogue box which will tells the user to enter the file name with .java as an extension. After the user clicking the ok button it will automatically saves the program in our BIN folder that is shown in fig3.

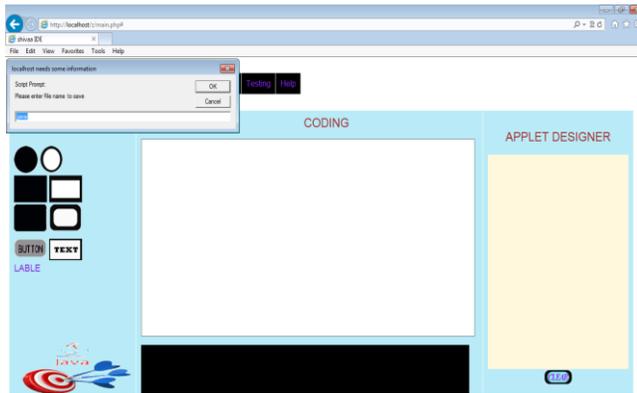


Fig3: To save our program in our system

When the user decided to do the applet program, first the output of that program is designed in the applet designer by using the tools and after the design when the user double click on the designer it will automatically generates the corresponding code for that output.

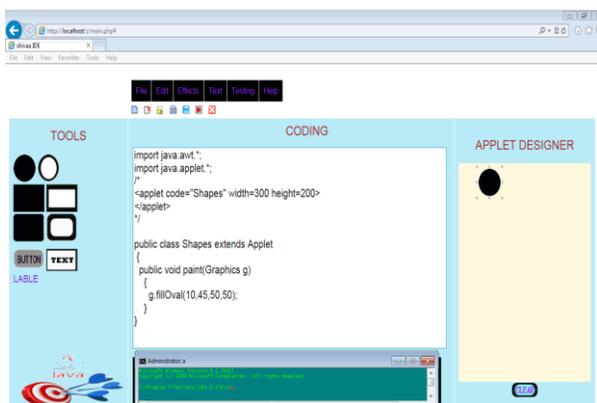


Fig4: To design the applet in applet designer that generates the program dynamically.

When the user decided to change the size and position even after the code generated .According to the user modification the corresponding value of the coordinates will be changed dynamically inside the program this is shown in fig 4.,

## VI. FUTURE ENHANCEMENT

Our future enhancement of our project is to develop a compiler which is capable of automatic error clearance. During compilation the program will checks for the correctness of program .if error have been occurred .It will

display the error message, wait for user to correct it and won't run the program. To solve this we produce a compiler which without even telling the user about the error will automatically corrects the error.

Making our cool java as an ONLINE-IDE  
 Without depending on any software installation [5]

## VII. CONCLUSION

Thus the Cool Java Intelligent development Environment kit for java will make a new revolution for the programmers to do their works in a much efficient manner .The programmers typing time is reduced. It helps reduce the errors and work in a cost efficient way and user friendly.

## REFERENCES

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