

*Yash Mahajan SE IT B 04*

## 6) Post Experiment Exercise :-

### A) Extended Theory

Explain entry controlled loop and exit controlled loop used in java with example.

Entry controlled loop controls entry to the loop & this is why it is referred as entry controlled loop. An entry controlled loop checks the condition at the time of entry & if the condition or expression becomes true the control transfers into the body of the loop.

Eg:-

```
int count = 100;
while (count < 50)
    System.out.println("The count is " + count++);
```

```
int count
for (count = 100; count <= 50;
     count++) {
    System.out.println(count);
```

In both code snippets value of count is 100 & condition is count < 50, which is checked first, hence there is no output.

Exit controlled loop, controls exit of the loop, this is why it is referred as exit controlled loop & an exit controlled loop checks the condition for exit & if given condition for exit is evaluated to be true, control will exit.

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from the loop body or else control will enter again into the loop body. An example of controlled loop is do-while loop

Eg

```
int count = 100;
do {
```

```
    System.out.println( count++ );
} while( count < 50 )
```

Output :-

100

In this code snippet value of count is 100 & first the condition is count < 50 which is false yet the loop body will be ~~not checked~~ executed first then condition will be ~~executed~~ checked after that. Hence the output of the program is 100.

- 2) Explain the use of break & continue statement & differentiate between them.

Key	Break	Continue
Functionality	Break statement mainly used to terminate the enclosing loop such as while, for or switch wherever break is declared.	Continue statement mainly skips the rest of the loop wherever continue is declared & execute the next iteration.

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Execution flow	Break statement mainly resumes the control of the program to the end of loop & made execution flow outside the loop.	Continue statement resumes the control of the program to next iteration of the loop enclosing continue & made execution flows inside the loop again.
Usage	As mentioned break is used for the termination of enclosing loop.	On other hand continue causes early execution of next iteration of the enclosing loop.
Compatibility	Break statement can be used & is compatible with 'label', 'switch'.	We can't use continue statements with switch label as it is not compatible with them.
Causes	It causes early termination of the loop.	It causes early execution of next iteration.

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## D. Conclusion :-

In this experiment we have studied fundamentals of the Java programming language. We have studied different keywords in Java and have written programs to implement them.

Java has significant advantage not only as a commercial language but also as a teaching language.

It allows us to learn the various Object Oriented Programming fundamentals with great ease. Java itself embodies many best practices like in design patterns in its library.

Due to its efficient syntax and high security Java language has a variety of applications ranging from web development to big data technologies.