**Assignment Questions 5**

**Q1.What is Exception in Java?**

**Ans.Exception is refers to a mistake that will occur during the runtime of our application which will result in abnormal termination or abrupt termination our application which has a developer needs to handle**

**Exception > it’s a unwanted event which occurs at => runtime => Abnormal Termination**

**Q2.What is Exception Handling?**

**Ans. Exception handling is a process of handling exception in such a manner because of which abnormal termination of our application should not happen**

**Q3.What is the difference between Checked and Unchecked Exceptions and Error?**

**Ans. Checked Exception:**

**Checked Exception is a exception where compiler only will identify code there is any risky code and compiler only giving Warning during compile time only.**

**UnChecked Exception:**

**If compiler is not Checking then we can call it as UnChecked Exception**

**Error:Errors mostly occur at runtime that's they belongs to an unchecked type.**

**Q4.What are the difference between throw and throws in Java?**

**Ans. Throw: it is used to re throw an Exception**

**\* In Catch Block we usually write throw keyword.**

**\* Statement below the throw keyword is not allowed.**

**Throws: Java throw keyword used in the method Signature to declare an Exception which might be thrown by the function**

**While the Execution of the code**

**\* Throws is used the method signature**

**Q5.What is multi threading in Java? mention its advantages**

**Ans.Multihreading **in java it is a process of executing multiple threads simultaneously****

**Advantages:**

**\* it **doesn't block the user** because threads are independent and you can perform multiple operations at the same time.**

**\*You **can perform many operations together, so it saves time**.**

**\* Threads are **independent**, so it doesn't affect other threads if an exception occurs in a single thread.**

**Q6.Write a program to create and call a custom exception**

**Ans.**

**class** CustomException **extends** Exception {

String message;

CustomException(String str) {

message = str;

}

**public** String toString() {

**return** ("Custom Exception Occurred : " + message);

}

}

**public** **class** MainException {

**public** **static** **void** main(String args[]) {

**try** {

**throw** **new** CustomException("This is a custom message");

} **catch**(CustomException e) {

System.***out***.println(e);

}

}

}

**Q7.How can you handle exceptions in Java?**

**Ans. By using Try{}, Catch{}, block we handle exceptions in java.**

**We can handle Exception in 3Ways .**

**Handle Exception: using try Catch block.**

**Duck the Exception : Throws**

**Re-Throwing an Exception : try catch throw throws finally,**

**Q8.What is Thread in Java?**

**Ans.Separate flow of execution is called "Thread".**

**if there is only one flow then it is called "SingleThread" programming.**

**For every thread there would be a separate job.**

**Q9. What are the two ways of implementing thread in Java?**

**Ans. In java we can define,instantiate and start a new Thread in 2 ways**

**a. Implementing Runnable interface**

**b. extending Thread class**

**Q10.What do you mean by garbage collection?**

**Ans.Garbage collection is to identify and discord those objects that are no longer needed by the application.in order for the resources to be reclaimed and reused.**