ASSIGNMENT

LIst 10 exception types and their uses

1. IOException

- Thrown when an I/O operation fails.

- Use: Handle errors when reading or writing data.

- Example: FileOutputStream output = new FileOutputStream("output.txt"); output.write(-1);

1. NullPointerException

- Thrown when a null object is accessed.

- Use: Handle errors when working with null objects.

- Example: String string = null; string.length();

1. . NumberFormatException

- Thrown when a string cannot be parsed to a number.

- Use: Handle errors when converting strings to numbers.

- Example: String string = "abc"; int number = Integer.parseInt(string);

1. . RuntimeException

- Thrown when a runtime error occurs.

- Use: Handle errors that occur during runtime.

- Example: throw new RuntimeException("Runtime error");

1. . SQLException

- Thrown when a database operation fails.

- Use: Handle errors when working with databases.

- Example: Connection connection = DriverManager.getConnection("jdbc:mysql://localhost:3306/mydb", "username", "password");

1. StringIndexOutOfBoundsException

- Thrown when a string index is out of bounds.

- Use: Handle errors when accessing string characters.

- Example: String string = "Hello"; char character = string.charAt(10);

1. . TypeNotPresentException

- Thrown when a type is not present.

- Use: Handle errors when working with types.

- Example: Class<?> clazz = Class.forName("UnknownClass");

1. . UnsupportedOperationException

- Thrown when an unsupported operation is attempted.

- Use: Handle errors when attempting unsupported operations.

- Example: List<String> list = Arrays.asList("Hello", "World"); list.add("New Element");

1. . NoSuchMethodException

- Thrown when a method is not found.

- Use: Handle errors when invoking methods dynamically.

- Example: Method method = clazz.getMethod("unknownMethod");

1. . IllegalAccessException

- Thrown when an illegal access is attempted.

- Use: Handle errors when accessing classes, methods, or fields.

- Example: Constructor<?> constructor = clazz.getConstructor(String.class); constructor.newInstance("Hello");