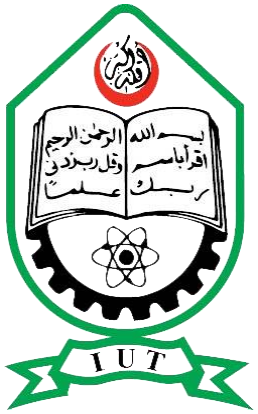
CSE 4308
Database Management Systems Lab
Lab 09
JDBC



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Understanding Java Code

main.cpp

```cpp
#include <iostream>

using namespace std;

class MyClass
{
    public:
    int id;
    string name;
};

int main()
{
    MyClass myObj;
    cout<<"What's your ID?"<<endl;
    cin >> myObj.id;
    myObj.name = "Anas";
    cout<<"My name is "<<myObj.name<<", ID "<<myObj.id<<endl;
    return 0;
}
```

input

```
What's your ID?
43
My name is Anas, ID 43


...Program finished with exit code 0
Press ENTER to exit console.
```

HelloWorld.java

```java
import java.util.Scanner;

public class HelloWorld
{
    private static class MyClass
    {
        public int id;
        public String name;
    }
    public static void main(String[] args)
    {
        MyClass myObj = new MyClass();
        Scanner input = new Scanner(System.in);
        System.out.println("What's your ID?");
        myObj.id = input.nextInt();
        myObj.name = "Anas";
        System.out.println("My name is "+myObj.name+", ID "+myObj.id);
    }
}
```

HelloWorld

```
"C:\Program Files\Java\jdk-14.0.1\bin\java.exe" "-javaagent:D:\Program Files\JetB
What's your ID?
43
My name is Anas, ID 43

Process finished with exit code 0
```

try and catch - sample code

```
public class TryCatchExample
{
   public static void main(String[] args)
   {
      int number, result;
      number = 40;
      try
      {
         result = number/0;
         System.out.println(result);
      }
      catch(ArithmeticException e)
      {
         System.out.println("Error in try block. Exception: " + e);
         result = number/10;
         System.out.println(result);
      }
      catch (Exception e)
      {
         System.out.println("Error in try block. Exception: " + e);
      }
//       result = number/0;
//       System.out.println(result);
      System.out.println("Code completed.");
   }
}
```

Sample JDBC Code Snippet

```
import java.sql.*;

public class Main {

   public static void main(String[] args)
   {
      String username = "senpai";
      String password = "senpai";
      String url = "jdbc:oracle:thin:@localhost:1521/XE";
      String sqlQuery = "SELECT AVG(AGE) FROM CUSTOMER";
      double avgAge = 0;


      try
      {
//          1) Register the driver class
         Class.forName("oracle.jdbc.driver.OracleDriver");

//          2) Create the connection object
         Connection con = DriverManager.getConnection(url, username, password);

//          3) Create the Statement object
         Statement statement = con.createStatement();

         System.out.println("Connection to database successful");
```

Sample JDBC Code Snippet

```
//        4) Execute the query
        ResultSet result = statement.executeQuery(sqlQuery);
        while (result.next())
        {
           avgAge = result.getLong(1);
        }
        System.out.println("Average age: "+avgAge);

//        5) Close the connection object
        con.close();
        statement.close();
        result.close();
    }
    catch (SQLException e)
    {
        System.out.println("Error while connecting to database. Exception code: " + e);
    }
    catch (ClassNotFoundException e)
    {
        System.out.println("Failed to register driver. Exception code: " + e);
    }

  }
```

Thank You!