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**Workshop 5**

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***Task 1***

To create JAVA GUI address pane application

***Logic***

* Declare the fields as per the requirement

=> TextFields(Fname,Lname,City,Prov,Post)

=> Buttons(Add, First, Next,Previous,Last,Update,Ipdate)

=> Flowpane(paneForInfo)

=> HBox(paneForButtons)

Function start()

=> This function will set all the field that is required in the pane

pane.Add.setOnAction(e -> add());

pane.First.setOnAction(e -> first());

pane.Next.setOnAction(e -> next());

pane.Previous.setOnAction(e -> previous());

pane.Last.setOnAction(e -> last());

pane.Update.setOnAction(e -> update());

Scene scene = new Scene(pane, 360, 130);

primaryStage.setTitle(" WorkShop5");

primaryStage.setScene(scene);

primaryStage.show();

Function Add()

=> This function will access the application.dat (random access file in rw mode)

try (

RandomAccessFile inout =

new RandomAccessFile("Application.dat", "rw");

) {

inout.seek(inout.length());

write(inout);

}

catch (FileNotFoundException ex) {}

catch (IOException ex) {}

catch (IndexOutOfBoundsException ex) {}

Function first()

=> This function is get the first name and if the length > 0 it will read from the file else it will print as “Address is empty”

try (

RandomAccessFile inout =

new RandomAccessFile("Application.dat", "rw");

) {

if (inout.length() > 0) {

inout.seek(0);

read(inout);

System.out.println("Reading address #1");

i = 1;

}

else {

System.out.println("Address is empty!");

}

}

catch (IOException ex) {

}

Function next()

=> This function is to get the next fields.

=> the condition is if the pointer \* 93 < inout.length

=> we will read from the file

=> other wise end of file

try (

RandomAccessFile inout =

new RandomAccessFile("Application.dat", "rw");

) {

if (i \* 93 < inout.length()) {

inout.seek(i \* 93);

read(inout);

i++;

System.out.println("Reading" + i);

}

else {

System.out.println("End of file!");

}

}

catch (IOException ex) {

}

Function previous()

=> This function is to get the previous field values

=> if the pointer greater than 1

=> we will decrement it by 1

=> otherwise assign the pointer to 1

we will read the data from the random access file

try (

RandomAccessFile inout =

new RandomAccessFile("Application.dat", "rw");

) {

if (i > 1)

i--;

else

i = 1;

inout.seek((i \* 93) - 93);

read(inout);

System.out.println("Reading address #" + i);

}

catch (IOException ex) {

}

Function update()

=> This function is to write the update value of the field to the random access file.

try (

RandomAccessFile inout =

new RandomAccessFile("Application.dat", "rw");

) {

inout.seek(i \* 93 - 93);

write(inout);

}

catch (FileNotFoundException ex) {}

catch (IOException ex) {}

Function write()

=> This function is to write the data entered in the pane to the random access file

inout.write(fixedLength(pane.FName.getText().getBytes(), TEMPFNAME));

inout.write(fixedLength(pane.LName.getText().getBytes(), TEMPLNAME));

inout.write(fixedLength(pane.City.getText().getBytes(), TEMPCITY));

inout.write(fixedLength(pane.Prov.getText().getBytes(), TEMPPROV));

inout.write(fixedLength(pane.Post.getText().getBytes(), TEMPPOST));

System.out.println("Address #" + i + " saved!”);

Function read()

=> This function is to read the values that is entered in the address pane from the random access file

int pos;

byte[] fname = new byte[TEMPFNAME];

pos = inout.read(fname);

pane.FName.setText(new String(fname));

byte[] lname = new byte[TEMPLNAME];

pos = inout.read(lname);

pane.LName.setText(new String(lname));

byte[] city = new byte[TEMPCITY];

pos += inout.read(city);

pane.City.setText(new String(city));

byte[] prov = new byte[TEMPPROV];

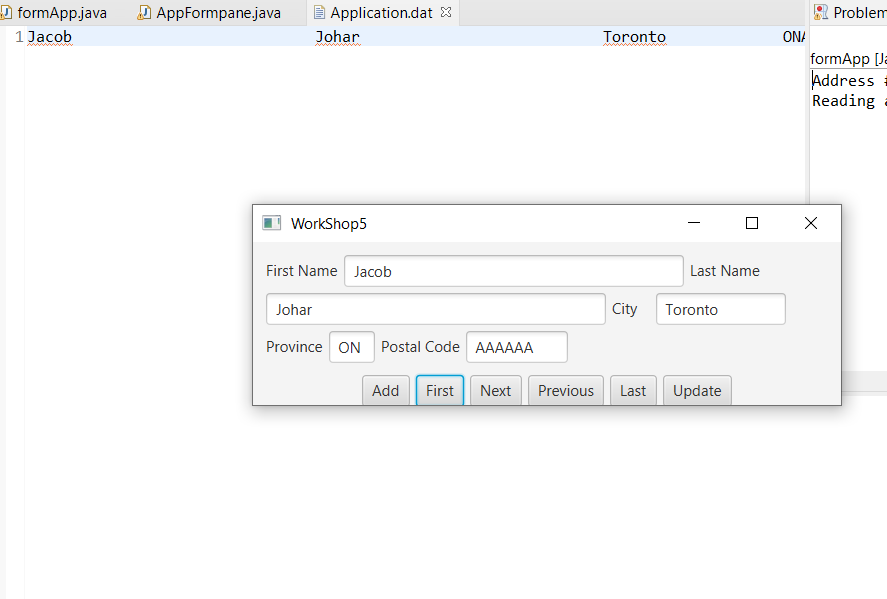
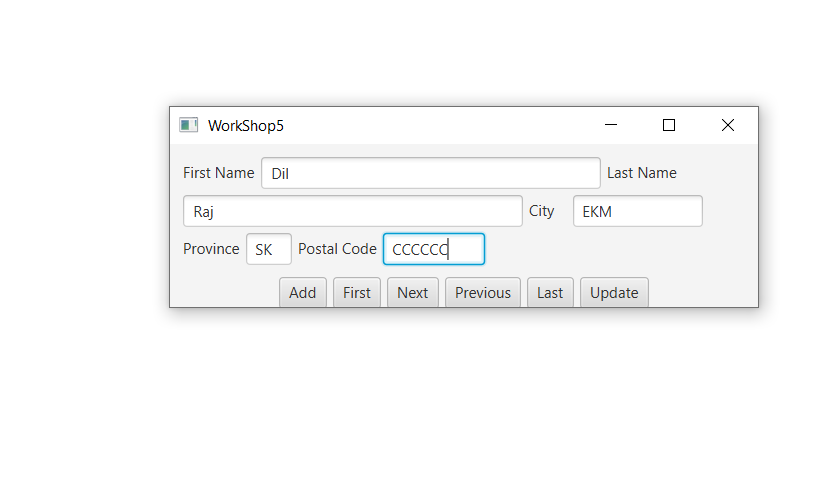
pos += inout.read(prov);

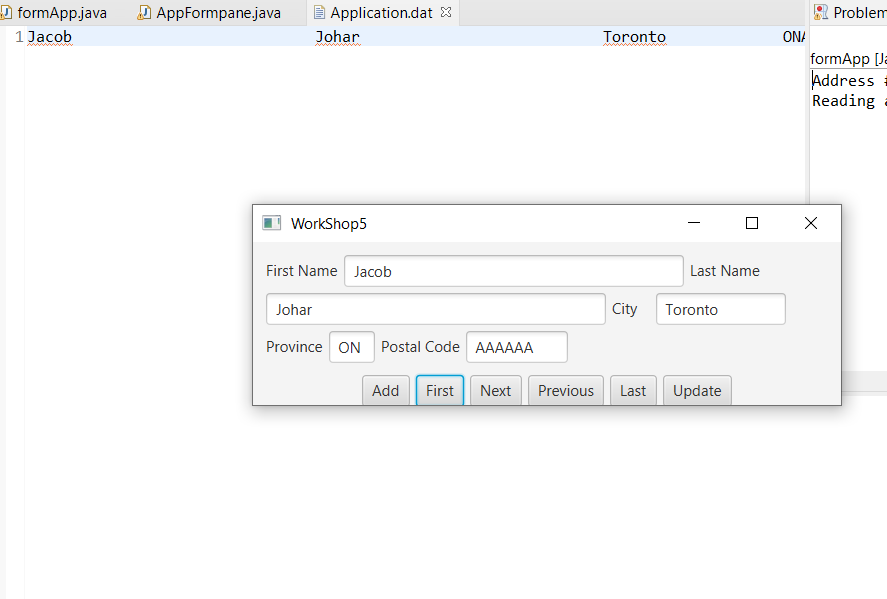
pane.Prov.setText(new String(prov));

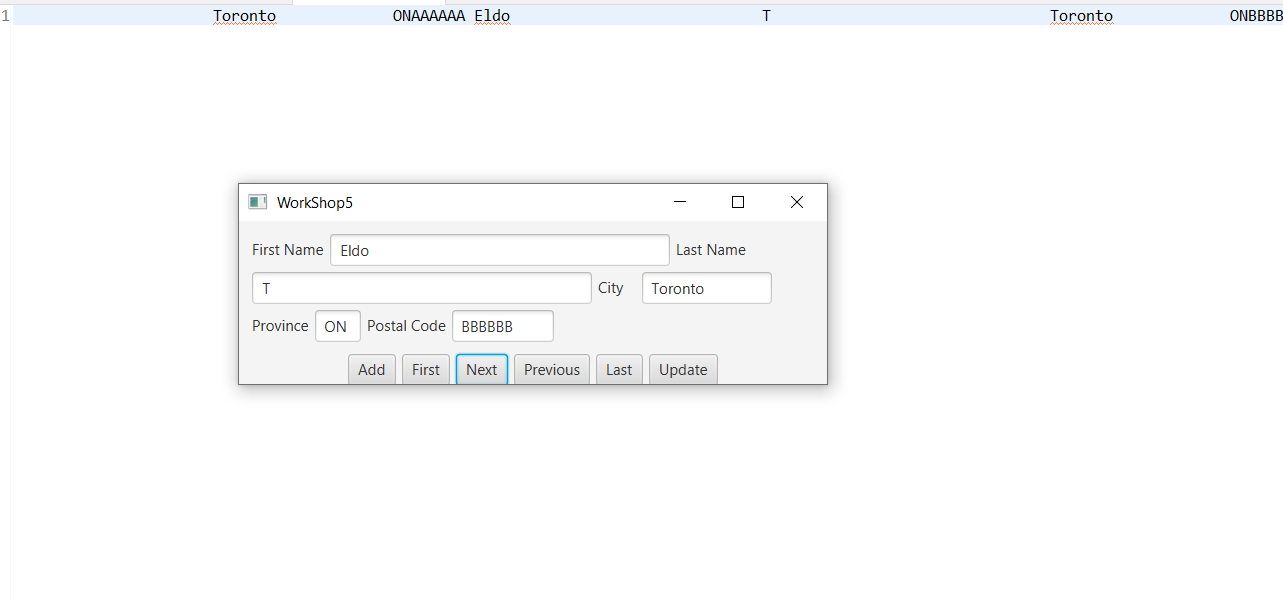
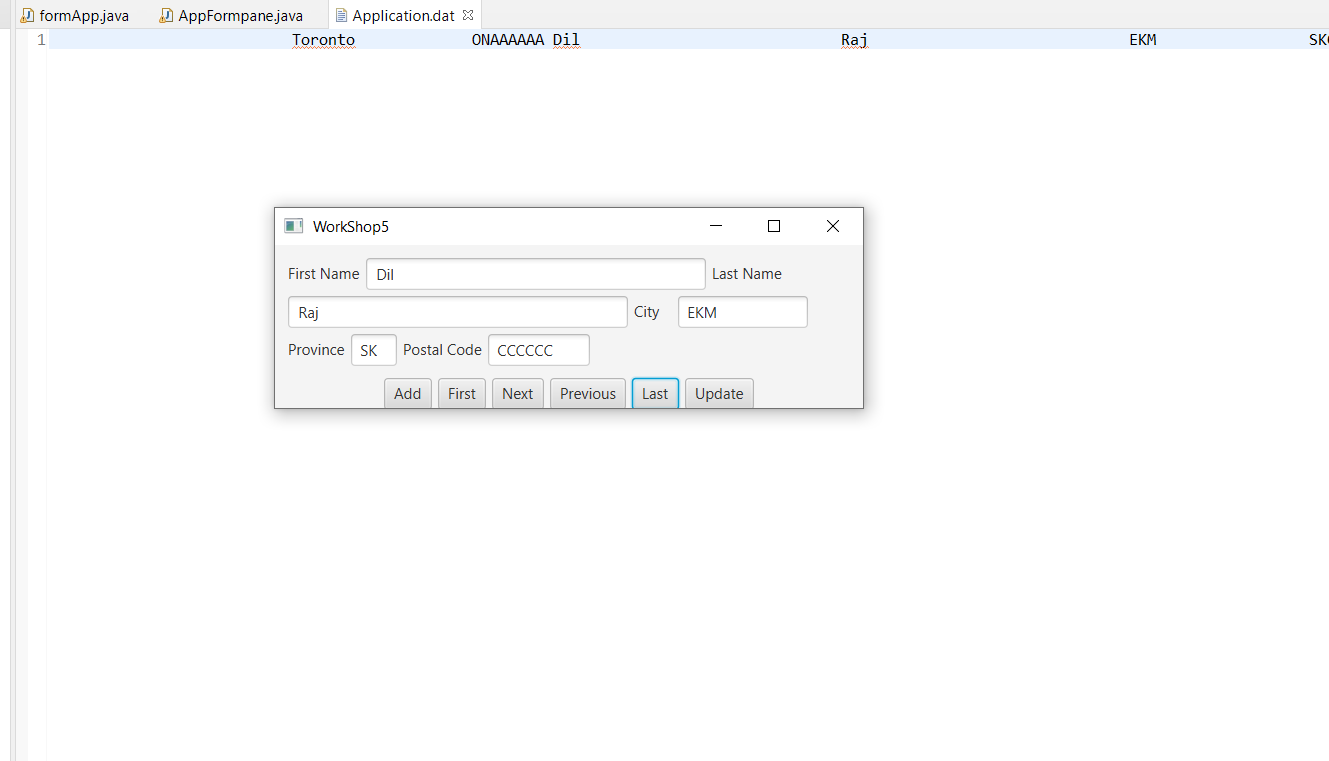
byte[] zip = new byte[TEMPPOST];

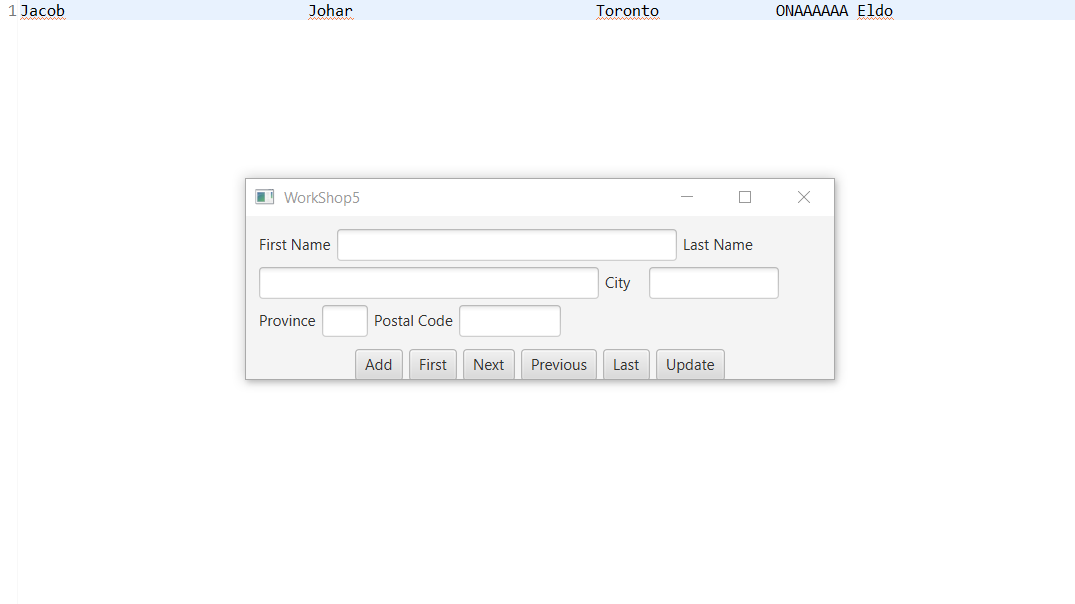
pos += inout.read(zip);

pane.Post.setText(new String(zip));

***Outputs***

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