Harman assignment day3

Q1.

```
package day3;

public class Q1 {
	import java.io.BufferedInputStream;
	import java.io.BufferedOutputStream;
	import java.io.FileInputStream;
	import java.io.FileNotFoundException;
	import java.io.FileOutputStream;
	import java.io.FileReader;
	import java.io.FileWriter;
	import java.io.IOException;

	public class Assignment3Q1 {

		public static void main(String[] args) {

			long start = System.currentTimeMillis();
			// byte
			try {
				FileInputStream fr = new

FileInputStream("/Desktop/photo/bar.mp4");
				FileOutputStream fw =
					new
FileOutputStream("/Desktop/photo/bar2.mp4");

				BufferedInputStream fr = new
					BufferedInputStream(new
FileInputStream("/Desktop/photo/bar.mp4"));
				BufferedOutputStream fw = new BufferedOutputStream(
					new
FileOutputStream("/Desktop/photo/bar2.mp4"));
				int i = 0;
				while ((i = fr.read()) != -1) {
	fw.write(i);
				}
				fw.close();

			} catch (FileNotFoundException e) {
				e.printStackTrace();
			} catch (IOException e) {
				e.printStackTrace();
			}

			long end = System.currentTimeMillis();

			System.out.println("time taken : " + (end - start) + " ms");

			//char
			try {
				FileReader fr=new
FileReader("/home/raj/Desktop/photo/bar.mp4");
```

```
                        FileWriter fw=new
FileWriter("/home/raj/Desktop/photo/bar2.mp4");
                        int i=0;
                        while((i=fr.read())!=-1) {
                              fw.write(i);
                        }
                        fw.close();

                  } catch (FileNotFoundException e) {
                        e.printStackTrace();
                  }catch(IOException e) {
                        e.printStackTrace();
                  }

                  System.out.println("file is written");
            }
      }


}
```

Q2.

```
package day3;


      import java.io.BufferedInputStream;
      import java.io.BufferedOutputStream;
      import java.io.FileInputStream;
      import java.io.FileNotFoundException;
      import java.io.FileOutputStream;
      import java.io.FileReader;
      import java.io.FileWriter;
      import java.io.IOException;

      public class Q3 {

            public static void main(String[] args) {

                  long start = System.currentTimeMillis();
                  // byte
                  try {
                        FileInputStream fr = new

FileInputStream("/Desktop/photo/bar.mp4");
                        FileOutputStream fw =
                                    new
FileOutputStream("Desktop/photo/bar2.mp4");

                        BufferedInputStream fr = new
                                    BufferedInputStream(new
FileInputStream("Desktop/photo/bar.mp4"));
                        BufferedOutputStream fw = new BufferedOutputStream(
                                    new
FileOutputStream("/Desktop/photo/bar2.mp4"));
                        int i = 0;
                        while ((i = fr.read()) != -1) {
```

```
                        fw.write(i);
                    }
                    fw.close();

                } catch (FileNotFoundException e) {
                    e.printStackTrace();
                } catch (IOException e) {
                    e.printStackTrace();
                }

                long end = System.currentTimeMillis();

                System.out.println("time taken : " + (end - start) + " ms");


                System.out.println("file is written");
            }
        }
```

Q3.

```
package day3;


    import java.io.BufferedInputStream;
    import java.io.BufferedOutputStream;
    import java.io.FileInputStream;
    import java.io.FileNotFoundException;
    import java.io.FileOutputStream;
    import java.io.FileReader;
    import java.io.FileWriter;
    import java.io.IOException;

    public class Q3 {

        public static void main(String[] args) {

            long start = System.currentTimeMillis();
            // byte
            try {
                FileInputStream fr = new
FileInputStream("/Desktop/photo/bar.mp4");
                FileOutputStream fw =
                        new
FileOutputStream("Desktop/photo/bar2.mp4");

                BufferedInputStream fr = new
                        BufferedInputStream(new
FileInputStream("Desktop/photo/bar.mp4"));
                BufferedOutputStream fw = new BufferedOutputStream(
                        new
FileOutputStream("/Desktop/photo/bar2.mp4"));
                int i = 0;
                while ((i = fr.read()) != -1) {
                    fw.write(i);
                }
                fw.close();
```

```
                } catch (FileNotFoundException e) {
                        e.printStackTrace();
                } catch (IOException e) {
                        e.printStackTrace();
                }

                long end = System.currentTimeMillis();

                System.out.println("time taken : " + (end - start) + " ms");


                System.out.println("file is written");
        }
    }
    package  day3;

    import java.io.Serializable;

    public class Address /* implements Serializable */ {
        private static final long serialVersionUID = 1L;

        private String addressLocation;
        private String city;
        private String country;

        public String getAddressLocation() {
                return addressLocation;
        }

        public void setAddressLocation(String addressLocation) {
                this.addressLocation = addressLocation;
        }

        public String getCity() {
                return city;
        }

        public void setCity(String city) {
                this.city = city;
        }

        public String getCountry() {
                return country;
        }

        public void setCountry(String country) {
                this.country = country;
        }

        public Address(String addressLocation, String city, String country)
{
                this.addressLocation = addressLocation;
                this.city = city;
                this.country = country;
        }

        public Address() {}
```

```
		@Override
		public String toString() {
			return "Address [addressLocation=" + addressLocation +
					", city=" + city + ", country=" + country + "]";
		}


	}
	import java.io.Serializable;

	class Employee /* implements Serializable */{
		private static final long serialVersionUID = 1L;

		private int id;
		private String name;
		private Address address;
		transient private double salary;

		public Employee(int id, String name, Address address, int salary) {
			this.id = id;
			this.name = name;
			this.address = address;
			this.salary = salary;
		}

		public int getId() {
			return id;
		}

		public void setId(int id) {
			this.id = id;
		}

		public String getName() {
			return name;
		}

		public void setName(String name) {
			this.name = name;
		}

		public Address getAddress() {
			return address;
		}

		public void setAddress(Address address) {
			this.address = address;
		}

		public double getSalary() {
			return salary;
		}

		public void setSalary(double salary) {
			this.salary = salary;
		}

	}
```

4.

```
package day3;


public class Book {
	private int id;
	private String sbn;
	private String title;
	private String author;
	private int price;

	public Book(int id, String sbn, String title, String author, int price) {
		this.id = id;
		this.sbn = sbn;
		this.title = title;
		this.author = author;
		this.price = price;
	}

	public int getId() {
		return id;
	}

	public String getSbn() {
		return sbn;
	}

	public String getTitle() {
		return title;
	}

	public String getAuthor() {
		return author;
	}

	public int getPrice() {
		return price;
	}

	public void setPrice(int price) {
		this.price = price;
	}


	public String toString() {
		return "Book [id=" + id + ", sbn=" + sbn + ", title=" + title + ",
author=" + author + ", price=" + price + "]";
	}


}
import java.util.*;
import java.io.*;

public class BookApp {
	private List<Book> books;

	public BookApp() {
```

```
			books = new ArrayList<Book>();
			init();
		}

		// reading the data from the file and populating the arraylist
		private void init() {
			String line = null;

			try {
				BufferedReader br = new BufferedReader(new
FileReader("data.txt"));
				while ((line = br.readLine()) != null) {
					String tokens[] = line.split(":");
					Book book = new Book(Integer.parseInt(tokens[0]),
tokens[1], tokens[2], tokens[3],
							Integer.parseInt(tokens[4]));
					books.add(book);
				}
			} catch (FileNotFoundException e) {
				e.printStackTrace();
			} catch (IOException e) {
				e.printStackTrace();
			}
		}

		public Book searchBook(int bookId) {
			boolean isFond = false;
			Book bookFound = null;
			for (Book book : books) {
				if (book.getId() == bookId) {
					isFond = true;
					bookFound = book;
					break;
				}
			}
			if (isFond)
				return bookFound;
			else
				throw new BookNotFoundException();
		}

		public void sellBook(String isbn, int noOfCopies) {
		}

		public void purchageBook(String isbn, int noOfCopies) {

		}

}
```

Q5.

```
package day3;

public class Q5 {
	public static void main(String[] args) {
```

```
		UserRegistration registration=new UserRegistration();

		try {
			registration.registerUser("raj", "usa");
		} catch (InvalidCountryException e) {
			System.out.println(e.getMessage());
		}
	}

}

public class InvalidCountryException extends Exception {
	private static final long serialVersionUID = 1L;

	public InvalidCountryException(String message) {
		super(message);
	}
}
public class UserRegistration {

	public void registerUser(String username,String userCountry)
			throws InvalidCountryException {
		if(userCountry.equals("india")) {
			System.out.println("successful registration of user");
		}else
			throw new InvalidCountryException("invalid country name : "+
		userCountry+" please provide india");
	}
}
```