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Marwadi UNIVERSITY

Index

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No.	Date	Experiment Description / Subject	Page	Marks	Faculty's Signature
1	3/3/22	Worksheet - 1			
2	17/3	Worksheet - 3			
3	30/3	Worksheet - 4			
4	7/4	Worksheet - 6			
5	14/4	Worksheet - 5			
6	31/5	Worksheet - 2			
7	31/5	Worksheet - 7 to 10			

Subject Code: 01CT0105

Subject Name: Object Oriented Programming

B. Tech. Year – I (Semester II)

UNIT – 7, 8, 9, 10

Worksheet – 7

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Q-1: Differentiate

Answer:

AWT	SWING
1) Java AWT is an API to develop GUI applications in Java.	1) Swing is a part of Java Foundation Classes & is used to create various application.
2) The components of Java AWT are heavy weighted.	2) The components of Java Swing are light weighted.
3) The execution time of AWT is more than swing.	3) The execution time of Swing is less than AWT.
4) MVC pattern is not supported by AWT.	4) MVC pattern is supported by swing.
5) AWT provide comparatively less powerful components.	5) Swing provides more powerful components.

Thread	Runnable
1) Thread is a class. It is used to create a thread.	1) Runnable is a functional interface which is used to create a thread.
2) It has multiple methods including start() & run().	2) It has only abstract method.
3) More memory required.	3) Less memory required.
4) Multiple inheritance is not allowed in java hence after a class extends Thread class, it can not extend any others.	4) If a class is implementing the runnable interface then your class can extend another class.

Q-2: Explain two File and two Stream Classes.

Answer:

File classes

- The file class is an abstract representation of file & directory pathname & can be either absolute relative.
- The file class is Java's represent a tier of a file directory pathname.

→ Constructors

File (File parent, String child)

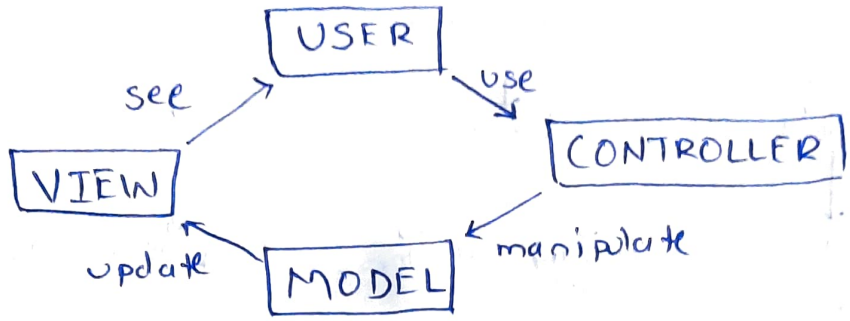
- creates a new file instance from a parent abstract pathname & child pathname string.

File (string Pathname):

- creates a new file instance by converting the given pathname string into an abstract pathname.
- There are two basic types of stream defined by Java, called by the stream & character stream.
- The byte system classes provide convenient mens for handling input & output of bytes & character streams provide a convenient means for handling input & output of characters respectively.

Q-3: Explain MVC Architecture with Figure.

Answer:



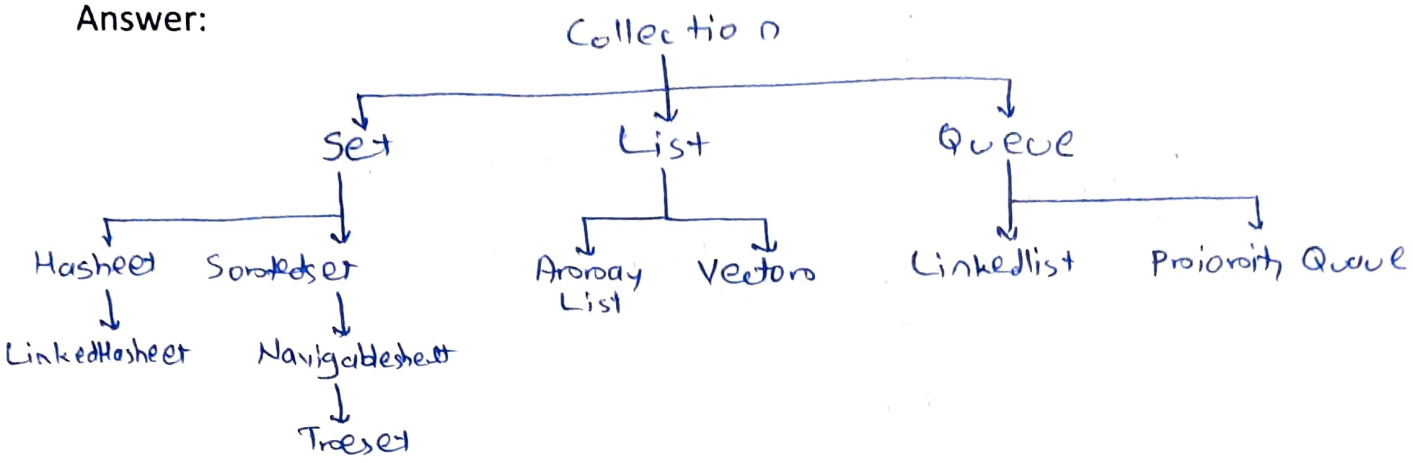
Application

MVC is known as architural pattern, which embodies three parts Model, View & Controllers. To be more precise it devides the application into three parts : 1) Model 2) View 3) Controllers It's use foro desktop graphical usero interface but how it used foro designing mobile apps.

Even through often it is known as design Pattern but at most be wroong if we reffero it only as a design pattern because design are used, to solve specific technical problem whereas architecture pattern is used foro solving architectured of application.

Q-4: Draw Figure of Collection Framework and Explain Set, List, Queue, Map,TreeSet.

Answer:



1) Set : Set is a collection that can't contain duplicate elements it models the mathematical set of Abstraction.

2) List : Lists are zero based note that these operations may execute in time proopotional to index value to some implementations.

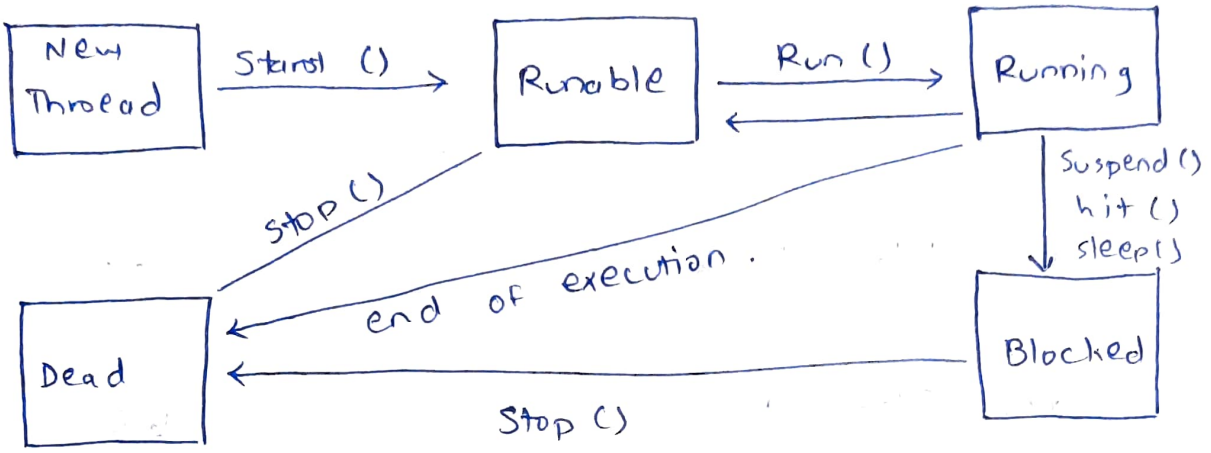
3) Queue : Queue interface present in java util package and extends collection interface is used to hold elements about to be processed in first in first out orders.

4) Map : Map in java is an interface available in java.util & it stores the data in key & values pairs, it does not allow duplicate keys.

5) Treeset : Treeset is one of the most important implementations of sorted set interface in java thus uses tree for storage.

Q-5: Explain Thread Life Cycle with Figure.

Answer:



These all are states for run any thread in java.

1) New → It create thread that has not yet started the execution.

2) Runnable → Ready for execution

3) Blocked → Waiting to monitor lock to enter

4) Running → Running means processor has allocated time slot to thread for its execution

5) Dead state → A thread dies or moves into dead state automatically when the thread done it's execution or complete it's task or when the stop () method is called.

References		
Q No	Book Name	Page No
1	Java Black Book	171
2	Java Black Book	616
3	Java Black Book	356
4	Java Black Book	768
5	Java Black Book	675