Object Oriented Brogramming in Java Interview Questions

- Q1) (a) What are the differences between Procedural Purgramming Languages?

 2nd Object Oriented Purgramming Languages?
 - (b) What are the drawbacks of procedural programming language?
 - C) What are the needs/advantages object oriented programming language?

Procedural Programming

- · Fourses on functions & logic |
 - · hess reliable & secure Ly No access modifiess
- · Less reusability & difficulty
 in maintaining the codebase
- hanquage

 Note: 7 Javascoipt is functional
 programming language

Object oriented Pergrammine

- Focuses on data & objects | Ly Data members & member functions
- o More reliable & Secure

 Data Hiding & Encapsulation
- · More reusability & Easy meintoinability

 Due to Inheritance & Polymorphism
- · Example! C++, Java, Python, C#
- I higher order functions

Need of Object Oriented Pugramming

PILLARS OF OOPS

Encapsulation

-> classes & objects

-> Getters & Setters

-> Constauctors (types & chairing)

-> this, static, final Reywood

Inhentance

-> Types of Inheritance

-> Is A (Imheritance) vs has A (composition)

Jupes Keywood

> Multiple Inheritance (Diamord Problem)

/olymorphism

> Compile Time

method overloading

> Runtime or Dynamic or method overriding Abstraction

& Data Hiding

-> fackages

-> Access Specifier

- Abstract classes

-> Interfaces

(20) Explain l'oftware Development Process ion Jova, what are Various components in Jova? Why is Java platform independent? secondowy

Secondowy

Land disk Chray (way) Javac marijar Jano mais Execution Machine Java byte arguage Code code 711 avac Jana Compiler Machine) gave · class ntermediate Compiletine executiontin

Java Architecture

Oracle

Java Development Ket (JDK) = JRE + Development Tools { Interpreter, Class Looder, Compiler (jovac) } Linker,

> Java Runtime Environment (JRE) = JVM + Library Classes

Java Virtual Machine (Jrm)

H Java & Platform Independent Weres & 2010 geores 169Bran · class file CPV Unix/Linux Mac OS windows S Resources Resources Resources (Hord wore) (Hardware) (Mardware)

Yarry aps > 2 faster Java o cpp source code gava suvorce code compilan · class byte codo executable file 21 •6x6 ven on operating syst Linux mac らごう

a) What are differences between Purgram & Process? What do you mean by process memory layout? Emplois the Gleps in process Creation/program enecution?

(secostrole)

Program -> Code/ Set of Instructions (• jana)

Program under execution is known as puccess

Process = Program (Code) + Stack & Heap Memory

† Other resources

CCPU, disk, Network, 1/0 file, etc)

Process Memory Layout (Random pacety main memory RACI Text/Code Segment Program/Instructions Heap Memory Function Call Stack Prinitive Variables Reference Variables Annaye, String Static Variable function scape intector, booken, shortsbyteslong, from, double lifetime of fr Global/Static Data Segment Static data, global data Constant

A Steps in Poweram Execution Runs code. After doing /ntermediate Class bador line-by-line byte code vonticato, loads the Code and optimization menory for enecutable primitives & reference is allocated in stuck priau binary code JIT(Just In Time) into the code & Static romables, compiler. Objects in heaps Segment