**ITRW222 Class test 1 / Klastoets 1**

Consider the following code segments / Beskou die volgende kode segmente

public abstract class CellUser

{

private String name;

private String addressLine1;

private String addressLine2;

private int postalCode;

private String serviceProvider;

private String cellNumber;

public CellUser()

{

this("", "", "",0, "","");

}

public CellUser(String client,String add1,String add2,int postCode,String servProv, String cellNr)

{

setName(client);

//…..

}

public void setName(String cn)

{

name = cn;

}

public String getName()

{

return name;

}

public String toString()

{

return " Client Name: " + getName() + " Cell Number: " + getCellNumber();

}

public abstract String showAccount();

}

//-------------------------------------------------------------------

public class ContractUser extends CellUser

{

private String contractStartDate;

private String contractDescription;

private String phoneDescription;

private int freeMinutesLeft;

private int freeSmsLeft;

public ContractUser()

{

super();

contractStartDate = "";

// similar code

}

public ContractUser(String cn,String add1,String add2,int pc, String sp, String cnr, String cStartDate, String

cDescr, String phoneDescr, int minutesLeft, int smsLeft)

{

super(cn, add1, add2, pc, sp, cnr);

setContractStartDate(cStartDate);

setContractDescription(cDescr);

// similar code

}

public String showAccount()

{

return " Client Name: " + getName() + " \n Address 1: " + getAddressLine1() + "\n Address 2: " + getAddressLine2() + "\n Postal Code: " +

getPostalCode() + "\n Service Provider: " + getServiceProvider() + "\n Cellphone Number: " + getCellNumber() + "\n Contract Start Date: " + getContractStartDate()

+ "\n Contract Description: " + getContractDescription() + "\n Phone Description: " + getPhoneDescription() + "\n Free Minutes Left: "

+ getFreeMinutesLeft() + "\n Free Sms's Left: " + getFreeSmsLeft();

}

public String toString()

{

return super.toString()+ " Phone Description: " + getPhoneDescription();

}

}

///////////////////////////////////////

public class Driver

{

public static void main(String [] args)

{

CellUser [] clients = new CellUser[5];

clients[0] = new PrepaidUser("Godfrey Mokoena"," 2 Lonjumpstreet", "Potchefstroom",2520, "Cell-C","0780191000",300,15,2);

clients[1] = new ContractUser("Wade van Niekerk","4 longroad", "Klerksdorp",2500, "Vodacom","08335423123","13/2/17", "Weekend plus100", "Nokia", 64,2);

clients[2] = new PrepaidUser("Castor Semenya","7 Fastlane", "Mahikeng",1234,"MTN","0823542333",300,55,6);

clients[3] = new ContractUser("Akani Simbine","23 Sprintlane", "Johannesburg",2000,"Cell-C", "0772361537","12/5/17", "Topup 500", "Samsung", 147,60);

clients[4] = new PrepaidUser("Luvo Manyonga","1 Sand street", "Carletonville",2000,"MTN","0842222525",579,17,2)

for(int i = 0; i <5; i++)

{

System.out.println(clients[i]);

System.out.println(clients[i].showAccount());

}

}

}

**Complete the answer sheet / Vul die antwoordblad in**

Question / Vraag 1

|  |  |
| --- | --- |
| Which line of code contains the start of the default constructor for the CellUser class?  Watter kodelyn bevat die verstekkonstruktor van die CellUser klas? | |
| a.14 | b.10 |
| c.1 | d. Specify your own number on the answer sheet in block d  d. Spesifiseer jou eie nr op die antwoordblad in blok d |

Question / Vraag 2

|  |  |
| --- | --- |
| Consider the line 12: this(""', "", "",0, "",""); What is the role of the word “this”?  Beskou lyn 12: Wat is die rol van die woord: “this”? | |
| a. It assigns the values that follow to the instance variables  a. Dit ken die waardes wat volg aan die voorkoms  veranderlikes toe. | b. It calls a constructor in the same class with the same number of parameters.  b. Dit roep ‘n konstruktor in dieselfde klas met die dieselfde aantal parameters. |
| c. It sets all values to zero.  c. Dit maak al die waardes gelyk aan nul. | d. It indicates that this is the constructor.  d. Dit dui and dat dit die konstruktor is. |

Question / Vraag 3

|  |  |
| --- | --- |
| Consider line 19: public void setName(String cn). This is an example of a:  Beskou lyn 19. public void setName(String cn). Hierdie is ‘n voorbeeld van ‘n: | |
| a. Accessor method / toegansmetode | b. Constructor / konstruktor |
| c. Mutator method/ mutator metode | d. None of the above / geen een van bogennoemde |

Question / Vraag 4

|  |  |
| --- | --- |
| Consider line 24: public void getName(). This is an example of a :  Beskou lyn 24: public void setName(String cn). Hierdie is ‘n voorbeeld van ‘n: | |
| a. Accessor method / toegansmetode | b. Constructor / konstruktor |
| c. Mutator method/ mutator metode | d. None of the above / geen een van bogennoemde |

Question / Vraag 5

|  |  |
| --- | --- |
| Which of the following is not true concerning abstract classes?  Watter van die volgende is nie waarnie rakende abstrakte klasse? | |
| a. An abstract class contains an abstract method  a. ‘n Abstrakte klas bevat ‘n abstrakte metode | b. An object may be created of an abstract class  b. ‘n Objek kan geskep word van ‘n abstrakte klas |
| c. A reference variable to an object may be created of an abstract class  c. ‘n Verwysingsveranderlike na ‘n objek kan geskep word van ‘n abstrakte klas. | d. All of the above are true.  d. Al bogenoemde is waar. |

Question/ Vraag 6

|  |  |
| --- | --- |
| Consider line 47: super(); Which line of code will be executed as a result of this call?  Beskou lyn 47: super(); Watter kodelyn sal as gevolg van hierdie lyn uitgevoer word? | |
| a. 52 | b. 14 |
| c. 10 | d. Specify your own number on the answer sheet in block d  d. Spesifiseer jou eie nr op die antwoordblad in blok d |

Question / Vraag 7

|  |  |
| --- | --- |
| Consider the line 55: super(cn, add1, add2, pc, sp, cnr); Which line of code will be executed as a result of this call?  Beskou lyn 55: super(cn, add1, add2, pc, sp, cnr); Watter kodelyn sal as gevolg van hierdie lyn uitgevoer word? | |
| a. 52 | b. 14 |
| c. 10 | d. Specify your own number on the answer sheet in block d  d. Spesifiseer jou eie nr op die antwoordblad in blok d |

Question 8 / Vraag 8

|  |  |
| --- | --- |
| Consider line 83: CellUser [] clients = new CellUser[5]; Which of the following statements a or c is not true?  Beskou lyn 83: CellUser [] clients = new CellUser[5]; Watter van die volgende stellings a. of c. is nie waar nie? | |
| a. Five reference variables to the class CellUser is created  a. Vyf verwysingsveranderlikes na die klas CellUser word geskep | b. a and c are true.  b. a en c is waar. |
| c. The constructor of the class is called 5 times  c. Die konstruktor van die klas word 5 keer geroep. | d. a and c are false.  d. a en c is nie waar nie. |

Question / Vraag 9

|  |  |
| --- | --- |
| Consider line 83: CellUser [] clients = new CellUser[5]; Which of the following statements a or c is not true?  Beskou lyn 83: CellUser [] clients = new CellUser[5]; Watter van die volgende stellings a. of c. is nie waar nie? | |
| a. clients is the name of an array.  a. clients is die naam van die skikking. | b. a and c are true.  b. a en c is waar. |
| c. clients is a separate variable containing the value “null”.  c. clients is ‘n aparte veranderlike wat die waarde “null” bevat. | d. a and c are false.  d. a en c is nie waar nie. |

Question / Vraag 10

|  |  |
| --- | --- |
| Consider the line 97: System.out.println(clients[i]); Which line will be executed as a result of this call when i==1?  Beskou lyn 97: System.out.println(clients[i]);Watter lyn sal uitgevoer word as gevolg van hierdie roep wanneer i==1? | |
| a. 98 | b. 72 |
| c. 29 | d. Specify your own number on the answer sheet in block d  d. Spesifiseer jou eie nr op die antwoordblad in blok d |

Question 11

|  |  |
| --- | --- |
| Which statement best describes polymorphism?  Watters telling gee die beste beskrywing van polimorfisme? | |
| a. When a method of a subclass is called from an object of the same subclass.  a. Wanneer ‘n metode van ‘n subklas deur ‘n objek van dieselfde subklas geroep word. | b. When a method of a subclass is called from an object of another subclass.  b. Wanneer ‘n metode van ‘n subklas deur ‘n objek van ‘n ander subklas geroep word. |
| c. When a method of a subclass is called from an object of the superclass  c. Wanneer ‘n metode van ‘n subklas deur ‘n objek van dieselfde superklas geroep word. | d. None of the above  d. geen een van bogenoemde |

Question 12

|  |  |
| --- | --- |
| Which of the following statements describes shallow copy?  Watter van die volgende stellings beskyf vlakkopieer? | |
| a. An independent version of the object is created.  a. ‘n Onafhanklike weergawe van die objek word geskep. | b. An address of one object is assigned to another reference variable.  b. Die adres van een objek word aan ‘n ander verwsyingsveranderlike toegeken. |
| c. None of the above  c. Geen een van bogenoemde | d. Both of the above  d. Beide bogenoemde |

Question 13

|  |  |
| --- | --- |
| Consider line 98: System.out.println(clients[i].showAccount()); Which statement is true?  Beskou lyn 98: System.out.println(clients[i].showAccount()); Watter stelling is waar? | |
| a. This is an example of dynamic biding.  a. Dit is ‘n voorbeeld van dinamiese binding. | b. This line is an example of polymorphism.  b. Hierdie lyn is ‘n voorbeeld van polimorfisme. |
| c. This line first calls an abstract method van die superklas.  c. Die lyn roep eers die abstrakte metode van die superklas. | d. All of the above are true  d. Al bg is waar. |

Question/ Vraag 14

|  |  |
| --- | --- |
| Which line best indicates inheritance in the program code?  Watter lyn dui die beste aan dat daar oorerwing is in die programkode? | |
| a. 1 | b. 45 |
| c. 37 | d. Specify your own number on the answer sheet in block d  d. Spesifiseer jou eie nr op die antwoordblad in blok d |

Question/ Vraag 15

|  |  |
| --- | --- |
| Which of the following statements describes deep copy?  Watter van die volgende stellings beskyf diepkopieer | |
| a. An independent version of the object is created.  a. ‘n Onafhanklike weergawe van die objek word geskep. | b. An address of one object is assigned to another reference variable.  b. Die adres van een objek word aan ‘n ander verwsyingsveranderlike toegeken. |
| c. None of the above  c. Geen een van bogenoemde | d. Both of the above  d. Beide bogenoemde |

Answer sheet / Antwoordblad ITRW222

TEST 1 / TOETS 1

Surname and name / Van en naam:\_\_\_MEMO\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ no/ nr\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Indicate your answer with a large X in the correct block / Dui jou antwoord met ‘n groot X in die regte blokkie aan:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Question | A | B | C | D |
| 1 |  | X |  |  |
| 2 |  | X |  |  |
| 3 |  |  | X |  |
| 4 | X |  |  |  |
| 5 |  | X |  |  |
| 6 |  |  | X |  |
| 7 |  | X |  |  |
| 8 |  |  | X |  |
| 9 |  |  | X |  |
| 10 |  | X |  |  |
| 11 |  |  | X |  |
| 12 |  | X |  |  |
| 13 |  |  |  | X |
| 14 |  |  | X |  |
| 15 | X |  |  |  |