**GALGOTIAS UNIVERSITY**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**



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| **SUBJECT** | **Object Orinted Programming** | **PROGRAMME** | **B. Tech.** |
| **SUBJECT CODE** | **BCSO1T1006** | **BRANCH/SEMESTER** | **II** |
| **SECTION** | **24** | **FACULTY NAME** | **Miss Ragini Kumari** |
| **NAME STUDENT 1** | **Abhinav Kumar Choudhary** | **ADMISSION NO STUDNET 1** | **21SCSE1011615** |
| **NAME STUDENT 2** | **ASHUTOSH RAI** | **ADMISSION NO STUDNET 2** | **21SCSE1011691** |
| **NAME STUDENT 3** | **Aviral Gaurav** | **ADMISSION NO STUDNET 3** | **21SCSE1300029** |
| **NAME STUDENT 4** | **Deepansh Bhatia** | **ADMISSION NO STUDNET 4** | **21SCSE1011677** |
| **NAME STUDENT 5** | **Neeraj Singh** | **ADMISSION NO STUDNET 5** | **21SCSE1011675** |

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| **QUESTION**  **There is one poor family in Maharashtra. They have their own business to pick up fish from sea & sell that in the local market. In that family there were members including husband, wife & children. Everyday they do the same thing for their business. After some years they did not earned a good amount of profit from their business because daily expenses were bigger than what they earned from the business.  So husband & wife decided to do some other business. So they visited on of their relatives and ask for some suggestions.**  **They got a suggestion to make statues to sell them.**  **In this business they don’t need to invest extra money. So the family stated making statues** |

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| **ALGORITHM**  **For first year they sold 72 statues. After this 72 statue reached in 72 homes, relatives & neighbours loved the statue.**  **So for next year this family got an advance order of 2000 statue which are in different shapes like 1 feet, 2 feet, 5 feet, 10 feet & 20 feet.  The family member again visited their relative to resolve these relevant questions**  **i.e. How can they complete 2000 statues in one year? So they gave suggestion to use mold (meaning - a hollow container used to give shape to molten or hot liquid material when it cools and hardens) to give proper shapes to statues.  Now the family used these different molds like 1 feet, 2 feet, 5 feet, 10 feet & 20 feet. Following this, they can complete 100 statue per day.** |

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| **FLOWCHART** |

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| **C++ PROGRAM**  **#include <iostream>**  **namespace Real\_Life\_Example\_OOPS {**  **class Statue {**  **// class members declerations**  **public string shaadu;**  **public string knot;**  **public string water, pot;**  **public string One\_Tusk, Big\_Head;**  **public string chain, ring;**  **public string mouse\_color, Eye\_Color, Skin\_Color;**      **//constructor**  **public Statue() {**    **Cout<<Dafult Constructor in base class starts from here;**  **Eye\_Color = "Black";**  **Skin\_Color = "Redish\_White";**  **mouse\_color = "Black";**  **Cout<<Default values of Eye color: " + Eye\_Color;**  **Cout<<Default values of skin color: " + Skin\_Color);**  **Cout<<Default values of mouse colo: " + mouse\_color;**      **}**    **// parameterized constructor**  **public Statue(string x, string y) {**  **chain = x;**  **ring = y;**  **Cout<<("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_");**  **Cout<<”Parameterized Constructor of base class starts from here”;**  **Cout<< color: " + x + " ring color: " + y;**    **}**    **// function overloading without parameter**  **public void Do\_Painting() {**  **Cout<<"\*You are in Function Overloading Without Parameter \*";**  **Cout<<"\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_";**    **}**    **// function overloading with parameter**  **public void Do\_Painting(string Statue\_Name) {**  **Cout<<"\* You are in Function Overloading With 1 Parameter \*\*\*\*";**  **Cout<<”Statue Name is: " + Statue\_Name;**  **Cout<<"\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_";**  **Cout<<();**  **}**    **// operator overloading**  **//public static void operator brush(string paint)**  **//{**  **// // give color to statue**  **//}**  **// public static void operator brush(string paint)**  **//{**  **// // remove shadu from small surface area like between finger, below of eye, between legs, corner of legs / hands**  **//}**    **public void Do\_Painting(string Statue\_Name, string statue\_2) {**  **Cout<<"\*\*\*\* You are in Function Overloading With 2 Parameter \*\*\*\*";**  **Cout<<"Statue 1st is: " + Statue\_Name + "Statue 2nd is: " + statue\_2;**  **Cout<<"\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_";**  **Cout<<();**  **}**    **}**  **class Derived: Statue {**  **public string sofa\_color;**  **void add\_functionality() {**    **sofa\_color = "blue";**  **Cout<<"\*\*\*\* Here we are going to achieve Inheritance \*\*\*\*";**  **Cout<<"Eye color: " + Eye\_Color + " skin color: " + Skin\_Color;**  **Cout<<"Added sofa color: " + sofa\_color;**  **Cout<<"\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_";**  **Cout<<();**  **}**  **static void Main(string[] arg) {**  **Statue obj1 = new Statue();**  **Statue obj = new Statue("silver", "diamond");**  **obj.Do\_Painting();**  **obj.Do\_Painting("soldiers in diwali festival");**  **obj.Do\_Painting("animal", "shivaji statue");**  **Derived obj2 = new Derived();**  **obj2.add\_functionality();**  **obj2.ReadKey();**  **}**    **}**  **}**  **}**  **Output** |