

**Branch : MCA**

**Semester : Spring Semester 2021-22**

**Course Code : CA3205**

**Laboratory Name : Numerical Computing using C++**

**Assignment No. : ASSIGNMENT – 7 (GROUP- II )**

**Assignment Title : Polymorphism**

1) ) Implement the abstract class and override the functions of the abstract class in the provided derived classes.

**Class : ProbDistribution**

Members: (none)

Functions: getExpectedVal()=0, getVariance()=0

**Class: BinomialDistribution (inherits ProbDistribution)**

Members: p, n, k

Functions: getExpectedVal(), getVariance()

**Class: GeometricDistribution (inherits ProbDistribution)**

Members: p, k

Functions: getExpectedVal(), getVariance()

2) Implement the following class hierarchy using virtual function. Create base class pointers to hold address of base class as well as derived class objects and call the corresponding about() function of the assigned object.

**Class : FamilyMember**

Members : name, familyname, origin

Functions: constructor, destructor, about() //prints about father object

**Class : Citizen**

Members : name, country, year

Functions: constructor, destructor, about() //prints about mother object

**Class : Employee (inherits FamilyMember and Citizen)**

Members : name

Functions: constructor, destructor, about() //prints all about the child including parent info

-end-