



University of Central Punjab

Faculty of Information Technology

Mid-Term Exam Spring - 2021 Object Oriented Programming – Theory

Part 3 – Long Question

TASK:

Design a class named **WorkingDays**. The purpose of the class is to store a value that represents number of hours worked and then convert it into number of days worked according to the formula given below:

$$8 \text{ working hours} = 1 \text{ working day}$$

For example:

- ❖ 8 hours would be equal to 1 day
- ❖ 12 hours would be equal to 1.5 days
- ❖ 18 hours would be equal to 2.25 days

The class must have followings:

- Private attributes to store the value of working hours and working days (choose datatypes carefully)
- 3 overloaded constructors:
 - Default constructor (default value for working hours will be zero)
 - Parameterized constructor (must validate the argument for negative value)
 - Copy Constructor
- Setter and getter functions to set and retrieve the stored values
- A private function that will convert working hours into working days
- 3 overloaded operators:
 - **Addition (+) operator**
The value of working hours in the sum object will be the sum of the values of working hours in the individual objects (operands). Same goes for the working days.
 - **Greater than (>) operator**
Object with greater value of working hours will be considered as greater object than other.
 - **Assignment (=) operator**
Assign values of one object to another object.
