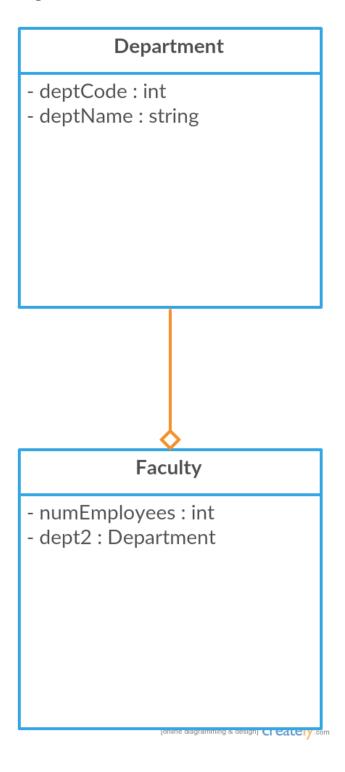
LAB 5: INTRODUCTION TO CLASSES (UML DIAGRAMS)

The below UML are made using https://creately.com/.



Fruit

- pricePerKg : doubleprofitPerKg : double
- getprofitPerKg() : double
- + set_pricePerKg(new_price : double) : void
- + set_profitPerKg(new_profit : double) : void
- + get_pricePerKg() : double

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Program 5.3

Customer

- billID : char
- billAmount : int
- + setID(a : char) : void
- + getID(): int
- + setBill(b : int) : void
- + getBill(): int

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```
Pet

- name : string
- age : int

+ func1 () : void
+ print () : void {query}
+ Pet () :
+ Pet (testString : string, testNumber : int) :
+ ~Pet () :
```

```
Polygon

- side : int
- length : double

+ Polygon () :
+ Polygon (input : int) :
+ Polygon (input : int, input2 : int) :
+ Polygon (input : double, input2 : int) :
```

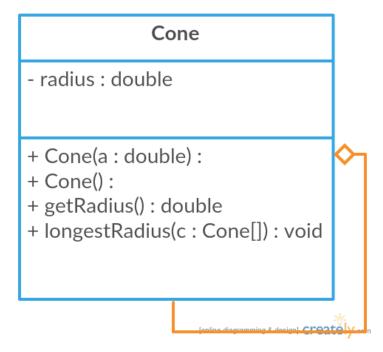
Code/ answers refer to answers/ code of Lab 5 in front

Date - day: int - month: int - year: int + Date(): + Date(a: int, b: int, c: int): + getDay(): int + getMonth(): int + getYear(): int

Program 5.7, 5.8, 5.9

Circle - radius : double + Circle(r : double) : + getRadius() : double + getArea() : double

+ pay: int + Bonus (p: int): + Bonus ():



Faculty

+ fac : int

+ display(): void

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Program 5.13

ExoticFruits

- price : double - discount : double

- getdiscount(): double

+ set_price(new_price : double) : void

+ set_discount(new_discount : double) : void

+ get_price(): double

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Program 5.14, 5.15, 5.16

+ print(): void {query}

BMI - weight: double - height: double - initialize(w: double, h: double): void + BMI(w: double, h: double): + BMI(b: double): + BMI(): + ~BMI(): + getBMI(): double {query}

Program 5.17

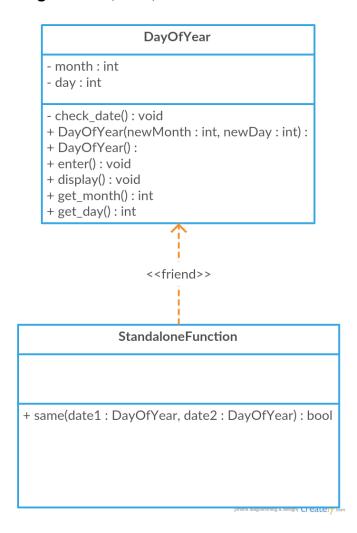
JobDesc - jobTitle : char[50] + JobDesc(jTitle : const char[]) : + ~JobDesc() :

```
Box

- length: int
- width: int
- height: int

+ Box():
+ Box(x:int):
+ ~Box():
+ print(): void {query}
```

Program 5.19, 5.20, 5.21



Program 5.22, 5.23

Student

- name : $char^*$
- subjects : SubjectCode*
- maxSubject: int
- subjectCount : int
- + Student():
- + Student(n : const char[]) :
- + Student(max : int) :
- + Student(codes : const SubjectCode[], count : int) :
- + ~Student():
- + getName() : const char* {query}
- + getSubject(index : int) : const char* {query}
- + print(): void {query}
- + setName(newName : const char[]) : void
- + insertSubject(code : const SubjectCode) : void
- + setSubject(index : int, code : const SubjectCode) : void

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