# Comp 4603

# Advanced C++

|  |  |  |  |
| --- | --- | --- | --- |
| Assignment | 7 | Part | 1 |

Student Name: Shamayev Alisher

BCIT ID: A01182685

Task 1: Your example of Adapter with UML diagram

|  |
| --- |
| In this situation we making to classes as football and basketball however what If we wanted to switch from football to basketball so we made adapter for each that transfers one to another. |

Task 2: Your example of Decorator with UML diagram

|  |
| --- |
| Text, letter  Description automatically generated  For this scenario we made a basic Burger case so we have one food class and one burger class that is related to Food so does Decorator class and it has two sub classes cheese and mushroom that decorates burger so can be a cheeseburger or burger with mushrooms. |

Task 3: Your example of facade with UML diagram

|  |
| --- |
| Text, letter  Description automatically generated  Here we made a Cinema case so there is two base classes Lights and Screen that both needed to in cinema and there is Cinema Façade class that take both in and uses them when to turn on/off lights and screen. |

Task 4: Your example of proxy with UML diagram

|  |
| --- |
| Text, letter  Description automatically generated  In this method we took Server scenario so basicalyy we have a server class and it has two sub classes real server that operates and a proxy server if some requests short easy enough proxy will take care of it, otherwise it will go to real server |

Task 5: Your example of bridge with UML diagram

|  |
| --- |
| Text, letter  Description automatically generated  This case we made a bridge as Transport class that will connect both person and type of transport, so a tourist can transport via car or a bus. |

Task 6: Your example of composite with UML diagram

|  |
| --- |
| Text, letter  Description automatically generated  Here we do an example of some Course Registration an example we have first base class Course Registration which extended by Course and SubCourse class. So we can add courses via any way or withdraw but we can not do it sub courses. |

Task 7: Your example of flyweight with UML diagram

|  |
| --- |
| A notebook with writing on it  Description automatically generated with low confidence  Here shapeFactory class will be our Flyweight factory that will createa and store shapes, also it stores them in a map and every shapes key will be color. |