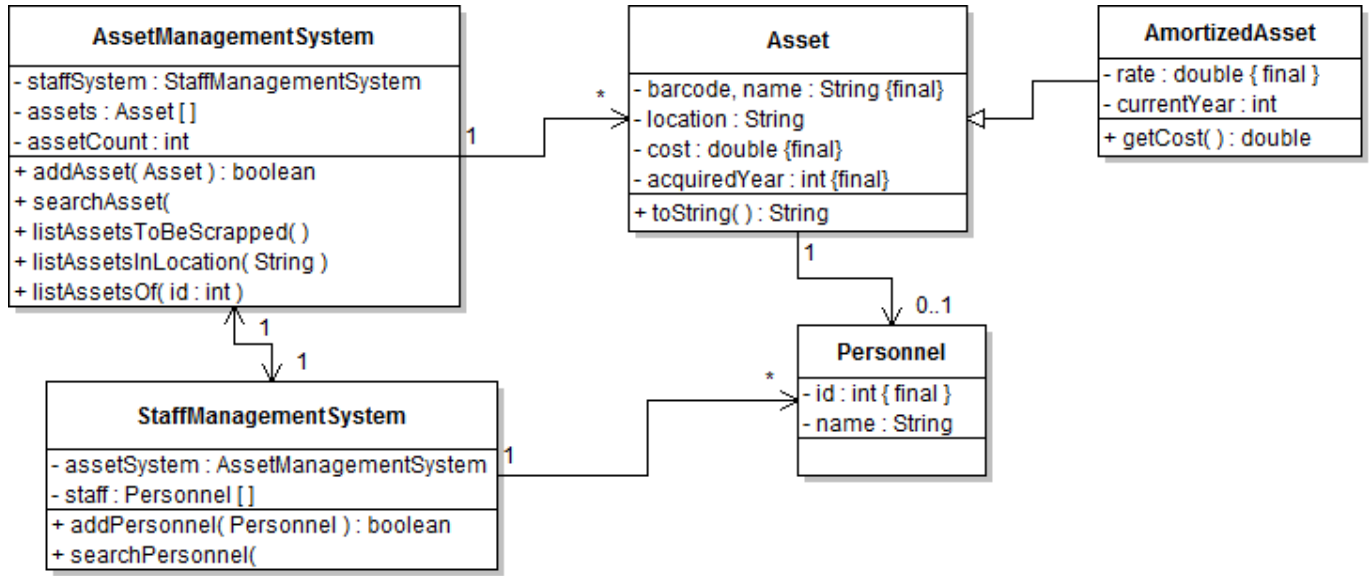


| BLM 2012 OBJECT ORIENTED PROGRAMMING Sec.1 (2018/2) D012 (1.VİZE) | | | | | | | |
|---|-----------|----------------|-----------------|----|----|----|--------------|
| Sıra | No | Adı | Soyadı | Q1 | Q2 | Q3 | 1. Ara Sınav |
| 1 | 08011057 | FATİH | OKYAY | 2 | 19 | 7 | 28 |
| 2 | 10011057 | ALI KEMAL CEM | ÖZDEMİR | 9 | 1 | 5 | 15 |
| 3 | 10011094 | YİĞİT | YANDAS | 13 | 11 | 2 | 26 |
| 4 | 11011017 | HAKAN CAN | İPEK | 14 | 46 | 0 | 60 |
| 5 | 11011084 | ZÜLFÜ | KORKMAZ | 9 | 35 | 0 | 44 |
| 6 | 12011015 | FATİH | ÇOMAK | 16 | 49 | 3 | 68 |
| 7 | 12011048 | SALİH MERT | YİĞİT | G | G | G | Girmedi |
| 8 | 12011065 | NAZİM BURAK | GENÇ | 19 | 28 | 5 | 52 |
| 9 | 12011079 | ÖĞÜZHAN | TIRYAKI | 17 | 46 | 5 | 68 |
| 10 | 13011047 | ENES | ÖZKAYA | 5 | 39 | 1 | 45 |
| 11 | 13011089 | FATMA BETÜL | KARAPINAR | 17 | 15 | 1 | 33 |
| 12 | 14011021 | BETÜL | AKTAŞ | 9 | 50 | 12 | 71 |
| 13 | 14011052 | RAHMİ CEMRE | ÜNAL | 18 | 46 | 3 | 67 |
| 14 | 14011063 | EMİNE BETÜL | ŞINAR | 9 | 20 | 0 | 29 |
| 15 | 14011064 | YAĞIZ | AKYÜZ | 13 | 50 | 2 | 65 |
| 16 | 14011704 | HATİCE | TEKİN | 10 | 20 | 0 | 30 |
| 17 | 15011003 | YUSUF EMIN | KINATAŞ | G | G | G | Girmedi |
| 18 | 15011012 | UFUK CAN | AKSOY | 17 | 44 | 5 | 66 |
| 19 | 15011024 | MUHAMMET CELAL | USTAÖMER | 15 | 32 | 12 | 59 |
| 20 | 15011030 | KÜBRA | KARAKUYU | 18 | 19 | 5 | 42 |
| 21 | 15011032 | ABDULLAH | GENÇ | 15 | 37 | 10 | 62 |
| 22 | 15011040 | MUHAMMED KAĞAN | ÜLKER | 8 | 5 | 1 | 14 |
| 23 | 15011044 | DILARA | SUVEREN | 5 | 35 | 5 | 45 |
| 24 | 15011050 | SERRA | SEMİZ | 5 | 11 | 0 | 16 |
| 25 | 15011051 | AŞIR FURKAN | KAYACIK | 9 | 21 | 6 | 36 |
| 26 | 15011053 | ORÇUN | ÇELİK | 18 | 44 | 5 | 67 |
| 27 | 15011057 | BAHADIR | GÜLTEKİN | 17 | 26 | 8 | 51 |
| 28 | 15011058 | HALİT | GÖRMEZ | 15 | 41 | 4 | 60 |
| 29 | 15011063 | METEHAN | ÇAYLAK | 10 | 16 | 1 | 27 |
| 30 | 15011064 | ALTUĞ NUMAN | YILDIZ | 17 | 29 | 5 | 51 |
| 31 | 15011066 | ALPEREN ÖNDER | ÖZKAN | 7 | 2 | 0 | 9 |
| 32 | 15011070 | FURKAN | ZEREY | 18 | 56 | 2 | 76 |
| 33 | 15011081 | ALPER | SELMAN | 13 | 26 | 2 | 41 |
| 34 | 15011702 | ÖZGÜR | KAN | 18 | 20 | 1 | 39 |
| 35 | 15011907 | HUSEYN | VALİYEV | 15 | 24 | 2 | 41 |
| 36 | 16011002 | AYKUT | AKDENİZ | 10 | 41 | 12 | 63 |
| 37 | 16011003 | AHMET | AYDIN | 10 | 28 | 8 | 46 |
| 38 | 16011004 | SERDAR | YILDIZ | 13 | 49 | 13 | 75 |
| 39 | 16011005 | MEHMET SERDAR | ORMANCI | 9 | 1 | 1 | 11 |
| 40 | 16011006 | MUSTAFA | ÖZTÜRK | G | G | G | Girmedi |
| 41 | 16011008 | CİHAN | KAYA | 18 | 43 | 4 | 65 |
| 42 | 16011010 | FURKAN NECATİ | ÜRKMEZ | G | G | G | Girmedi |
| 43 | 16011016 | AHMET | ELGÜN | 13 | 35 | 0 | 48 |
| 44 | 16011017 | MERT | ÖZ | 17 | 40 | 15 | 72 |
| 45 | 16011023 | MEHMET HAYRİ | ÇAKIR | 18 | 36 | 8 | 62 |
| 46 | 16011030 | İLAYDA | ŞAHİN | 16 | 30 | 12 | 58 |
| 47 | 16011032 | FARUK | ARSLAN | 17 | 32 | 7 | 56 |
| 48 | 16011033 | YUSUF | ANI | 11 | 35 | 13 | 59 |
| 49 | 16011039 | ONUR | AYDEMİR | 9 | 54 | 10 | 73 |
| 50 | 16011043 | RECEP FURKAN | KOÇYİĞİT | 8 | 53 | 10 | 71 |
| 51 | 16011048 | AHMET | BAĞCI | 3 | 35 | 8 | 46 |
| 52 | 16011057 | BUŞRA | KÜDEN | 9 | 44 | 8 | 61 |
| 53 | 16011061 | BERKAY | HAMARAT | 17 | 26 | 0 | 43 |
| 54 | 16011062 | EMİN TEYHAN | USLU | 10 | 35 | 3 | 48 |
| 55 | 16011063 | BURAK | DURUNLAR | 18 | 51 | 20 | 89 |
| 56 | 16011066 | MEHMET FURKAN | ŞAHİN | 17 | 45 | 7 | 69 |
| 57 | 16011067 | KEREM | YOLCU | 9 | 48 | 7 | 64 |
| 58 | 16011068 | SELİN | GEZER | 13 | 22 | 0 | 35 |
| 59 | 16011073 | İPEK | KOÇ | 14 | 9 | 7 | 30 |
| 60 | 16011078 | EDİZ | AYDOĞAN | 12 | 18 | 0 | 30 |
| 61 | 16011080 | TOYGAR | KAYAŞ | 20 | 40 | 12 | 72 |
| 62 | 16011081 | FAZLI | BOZATAY | 18 | 35 | 15 | 68 |
| 63 | 16011082 | CEM ÖZGÜR | DEDE | 1 | 36 | 0 | 37 |
| 64 | 16011085 | FATMA | TANRIKULU | 12 | 10 | 12 | 34 |
| 65 | 16011087 | CANER | KAYA | 18 | 45 | 10 | 73 |
| 66 | 16011088 | İBRAHİM | TİPİRDİK | 17 | 52 | 5 | 74 |
| 67 | 16011090 | AHMET | KAYGISIZ | 18 | 20 | 2 | 40 |
| 68 | 16011093 | HALİL İBRAHİM | ULUOĞLU | 19 | 35 | 5 | 59 |
| 69 | 16011112 | ENES | GÜNDÜZ | 0 | 0 | 2 | 2 |
| 70 | 16011114 | SEDAT | AKGÜL | 9 | 30 | 1 | 40 |
| 71 | 16011116 | ÖMÜR | ÇİÇEN | G | G | G | Girmedi |
| 72 | 16011120 | HÜSEYİN MURAT | GEZER | 5 | 10 | 7 | 22 |
| 73 | 16011133 | UMİT RASİM | TURHAN | 10 | 18 | 1 | 29 |
| 74 | 16011135 | UGURCAN | YILMAZ | G | G | G | Girmedi |
| 75 | 16011609 | SEYYİD İBRAHİM | GÜLEÇ | 20 | 53 | 7 | 80 |
| 76 | 16011701 | ATAKAN | TEKOĞLU | 13 | 35 | 0 | 48 |
| 77 | 16011703 | KAAN | AKINTÜRK | 2 | 35 | 1 | 38 |
| 78 | 16011705 | YUNUS EMRE | DEMİR | 8 | 35 | 5 | 48 |
| 79 | 16011906 | KHAGANI | KHANKISHİEV | 12 | 27 | 1 | 40 |
| 80 | 17011001 | ELİF | ÖZCAN | 18 | 28 | 5 | 51 |
| 81 | 17011017 | MEHMET ALİ | VARGÜN | 9 | 51 | 2 | 62 |
| 82 | 17011024 | ELİF | ÖZKAN | 17 | 29 | 5 | 51 |
| 83 | 17011029 | SEZİN | BİNER | 9 | 26 | 0 | 35 |
| 84 | 17011045 | BEYZA NUR | SEZGİN | 13 | 46 | 12 | 71 |
| 85 | 17011048 | TOLGA | ZİFTÇİ | 18 | 50 | 20 | 88 |
| 86 | 17011052 | HÜSREV | YUMUŞAK | 12 | 46 | 19 | 77 |
| 87 | 17011053 | MAHMUT MURAT | AKTAN | 18 | 42 | 15 | 75 |
| 88 | 17011060 | YUSUF ETKİN | KIZILDAG | 13 | 24 | 7 | 44 |
| 89 | 17011064 | ÖĞÜZHAN | SARIALIOĞLU | 12 | 42 | 5 | 59 |
| 90 | 17011066 | ALP BİNTUĞ | UZUN | 13 | 40 | 0 | 53 |
| 91 | 17011068 | FATMA ZEHRA | ÇETİN | 17 | 49 | 11 | 77 |
| 92 | 17011069 | ALPEREN | ÖZER | 15 | 26 | 4 | 45 |
| 93 | 17011072 | BERKE KAAAN | AÇIKGÖZ | 5 | 13 | 5 | 23 |
| 94 | 17011091 | EREN | TERZİOĞLU | 18 | 53 | 11 | 82 |
| 95 | 17011602 | SENA | OCAKÇI | 17 | 20 | 5 | 42 |
| 96 | 17011609 | İSMAIL | BAYRAM | 12 | 26 | 8 | 46 |
| 97 | 17011611 | BETÜL | ÖN | 17 | 48 | 13 | 78 |
| 98 | 17011902 | NİNİ | KVATCHANTIRADZE | 17 | 40 | 10 | 67 |
| 99 | 17011903 | NIHAD | GULUZADE | 18 | 45 | 10 | 73 |
| 100 | 17011904 | KAMRAN | BALAYEV | 9 | 19 | 0 | 28 |
| 101 | 17011908 | MCCDEDDİN | HARRAD | 17 | 56 | 8 | 81 |
| 102 | 18011602 | CANBERK | GÜLLÜOĞLU | 18 | 30 | 4 | 52 |
| 103 | 18011613 | MEHMET EMRE | GÜL | 17 | 40 | 10 | 67 |
| 104 | E18011005 | ABDUFATTOKH | ABDUFATTOKHOV | G | G | G | Girmedi |
| 105 | E18011006 | DASTAN | YULDASHEV | G | G | G | Girmedi |
| 106 | E18012004 | EMİNA | FAJIC | 0 | 1 | 0 | 1 |
| 107 | E18012005 | MERJEMA | MEHMEDOVIC | 1 | 10 | 0 | 11 |
| 108 | F18011003 | HÜSEYİN BERK | BUGUR | 17 | 20 | 15 | 52 |
| 109 | 13059023 | SABİHA YAĞMUR | BAYRAM | 18 | 22 | 4 | 44 |
| 110 | 13067701 | TURAN | ÖZEV | 0 | 1 | 0 | 1 |

YILDIZ TEKNİK ÜNİVERSİTESİ
ELEKTRİK-ELEKTRONİK FAKÜLTESİ / BİLGİSAYAR MÜHENDİSLİĞİ BÖLÜMÜ

| | | | | |
|--|-------------|--------------------|---------|-------|
| Öğrencinin Adı Soyadı: | Öğrenci No: | İmza: | | |
| Dersin Adı: BLM2012 Nesneye Yönelik Progr. | Tarih/Saat: | Sınav süresi: 90dk | | |
| Sınav Türü: | Vize1 + | Vize2 | Mazeret | Final |
| Unvan Ad Soyad (Ders Yürütücüsü): | | | | |

Answer the questions according to the incomplete UML class schema below. Keep in mind that the class schema is incomplete. Therefore you will need to add necessary member fields and/or methods to classes. Take necessary precautions to prevent illogical cases while coding.



Question 1: Write the source code of class AmortizedAsset. An amortized asset is an asset where its cost is decreased by a ratio for each year. For example, if the rate is 0.1, cost is \$100, acquired year is 2013 and the current year is 2015; the getCost method of AmortizedAsset must return 80.

Question 2: The details of some methods of the class AssetManagementSystem are given below. Write the source codes of only those methods.

- Constructor
- searchAsset: Searches for an asset with a given barcode as method parameter.
- addAsset: Adds an asset to the array. Two assets with the same barcode cannot reside in the array.
- listsAssetsToBeScrapped: Lists the assets having zero cost to the screen.
- listAssetsOf: Lists the assets that are used by the personnel whose ID is given. Do not try to search for items of unregistered personnel.

Question 3: Draw the UML sequence diagram of the method listsAssetsInLocation. That method Lists the assets that reside in the given location to the screen.

Question 1: Write the source code of class AmortizedAsset. (20p)

```
public class AmortizedAsset extends Asset {
    private final double rate;
    private int currentYear;

    public AmortizedAsset(String barcode, String name, double cost,
        int acquiredYear, double rate) {
        super(barcode, name, cost, acquiredYear);
        this.rate = rate;
    }
    public double getRate() { return rate; }
    public void setCurrentYear(int year) { this.currentYear = year; }
    public int getCurrentYear() { return currentYear; } //optional

    public double getCost() {
        double amortization = super.getCost() * rate * ( year - getAcquiredYear() );
        if( super.getCost() < amortization ) return 0;
        return super.getCost() - amortization;
    }
}
```

Question 2: The details of some methods of the class AssetManagementSystem are given below. (60p)

```
public AssetManagementSystem( StaffManagementSystem sms ) {
    assets = new Asset[300];
    assetCount = 0;
    this.staffSystem = sms;
}
public Asset searchAsset( String barcode ) {
    for( int i=0; i<assetCount; i++ )
        if( assets[i].getBarcode().equals(barcode) )
            return assets[i];
    return null;
}
public boolean addAsset( Asset newAsset ) {
    if( assetCount < assets.length && searchAsset( newAsset.getBarcode() ) == null ) {
        assets[assetCount] = newAsset;
        assetCount++;
        return true;
    }
    return false;
}
public void listsAssetsToBeScrapped( ) {
    for( int i = 0; i < assetCount; i++ ) {
        if( assets[i].getCost() == 0.0 ) {
            System.out.println(assets[i]);
        }
    }
}
public void listsAssetsOf( int id ) {
    if( staffSystem.findPersonnel(id) == null ) {
        System.out.println("Personnel with that ID does not exist.");
        return;
    }
    for( int i = 0; i < assetCount; i++ ) {
        if( assets[i].getPerson().getID() == id ) {
            found = true;
            System.out.println(assets[i]);
        }
    }
}
```

Question 3: Draw the UML sequence diagram of the method listsAssetsInLocation.

