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**Lab Works for Algorithm and Data Structures**

**Activity 1.2**


**(1)**

```java
public class TestMonster {
    public static void main(String[] args) {
        //create instances of three monsters (m1,m2,m3) and initialize
their fields
        Monster m1 = new Monster();
      m1.name = "Arthos";
        m1.hp = 22000;
        m1.mp = 10000;
        Monster m2 = new Monster();
        m2.name = "Porthos";
        m2.hp = 18000;
        m2.mp = 15000;
        Monster m3 = new Monster();
        m3.name = "Aramis";
        m3.hp = 15000;
        m3.mp = 80000;

        //declare an array monsters with type Monster and size = 3
        Monster[] monsters = new Monster[3];

        //initialize the array with m1,m2,m3
        monsters[0] = m1;
        monsters[1] = m2;
        monsters[2] = m3;

        //print all monsters in the array
        for(int i = 0; i < monsters.length; i++) {
            System.out.println("A monster has appeared! " +
monsters[i].name + " HP:" + monsters[i].hp + " MP:" + monsters[i].mp);
        }
    }
}
```

```
C:\Users\ASUS\.jdks\openjdk-19.0.2\bin\java.exe "-javaagent
A monster has appeared! Arthos HP:22000 MP:10000
A monster has appeared! Porthos HP:18000 MP:15000
A monster has appeared! Aramis HP:15000 MP:80000


Process finished with exit code 0
```

**(2)**

```
C:\Users\ASUS\.jdks\openjdk-19.0.2\bin\java.exe "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2022.2.1\lib\idea_rt.jar=57
A monster has appeared! Arthos HP:22000 MP:10000
A monster has appeared! Porthos HP:18000 MP:15000
Exception in thread "main" java.lang.NullPointerException Create breakpoint : Cannot read field "name" because "monsters[i]" is null
    at TestMonster.main(TestMonster.java:27)

Process finished with exit code 1
```