Assignment 6.
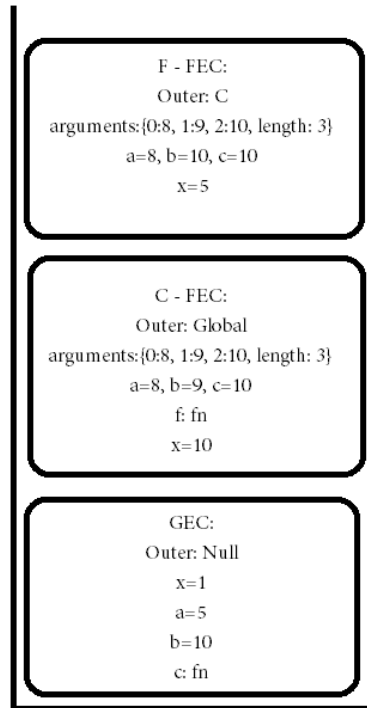
Question 1: Code 1:

1- What will be printed: ➔ Undefined 8 8 9 10 1.

2- Lexical environment diagram:
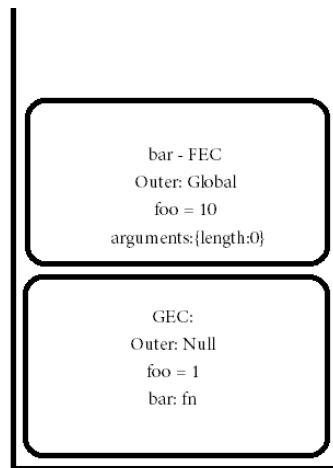
```
┌───────────────────────────────────────┐
│  ╭─────────────────────────────────╮   │
│  │          F - FEC:               │   │
│  │          Outer: C               │   │
│  │  arguments:{0:8, 1:9, 2:10, length: 3} │
│  │        a=8, b=10, c=10          │   │
│  │            x=5                  │   │
│  ╰─────────────────────────────────╯   │
│                                         │
│  ╭─────────────────────────────────╮   │
│  │          C - FEC:               │   │
│  │        Outer: Global            │   │
│  │  arguments:{0:8, 1:9, 2:10, length: 3} │
│  │        a=8, b=9, c=10           │   │
│  │            f: fn                │   │
│  │            x=10                 │   │
│  ╰─────────────────────────────────╯   │
│                                         │
│  ╭─────────────────────────────────╮   │
│  │            GEC:                 │   │
│  │         Outer: Null             │   │
│  │            x=1                  │   │
│  │            a=5                  │   │
│  │            b=10                 │   │
│  │            c: fn                │   │
│  ╰─────────────────────────────────╯   │
└───────────────────────────────────────┘
```

Code 2:

1- What will be printed: ➔ 81 25

2- Lexical environment diagram:

```
┌───────────────────────────────────────┐
│  ╭─────────────────────────────────╮   │
│  │        myFunction: FEC          │   │
│  │         Outer: Global           │   │
│  │      arguments:{length:0}       │   │
│  │                                 │   │
│  ╰─────────────────────────────────╯   │
│                                         │
│  ╭─────────────────────────────────╮   │
│  │            GEC:                 │   │
│  │         Outer: Null             │   │
│  │        myFunction: fn           │   │
│  │            x = 5                │   │
│  ╰─────────────────────────────────╯   │
└───────────────────────────────────────┘
```
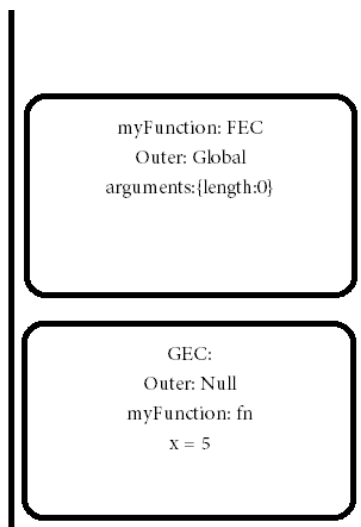
Code 3:

1- What will be printed: ➔ 10
2- Lexical environment diagram:

```
bar - FEC
Outer: Global
foo = 10
arguments:{length:0}
```

```
GEC:
Outer: Null
foo = 1
bar: fn
```

Question 2:

Global lexical environment:

Creation phase

```
GEC: Creation phase:    TDZ:
LE:{ Outer: Null,       army
makeArmy: fn}
```

Execution Phase

```
GEC: Execution phase:   TDZ:
LE:{ Outer: Null,       army
makeArmy: fn,
army= makeArmy}
```
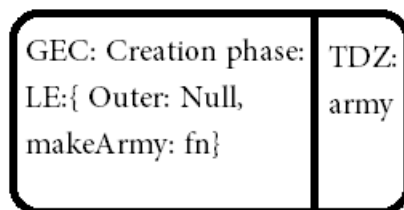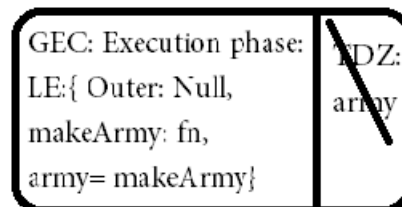
LE for makeArmy():

Creation phase

```
makeArmy() FEC:         TDZ:
LE:{ Outer: Global,     shooters
    arguments:{length:0}  i
}
```

Execution Phase

```
makeArmy() FEC:              TDZ:
LE:{Outer: Global,           shooters
    arguments:{length:0}     i
shooter:[function(){alert}],
    i=0, i=1, i=2      }
```
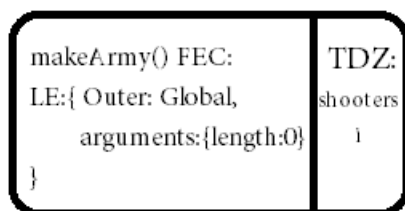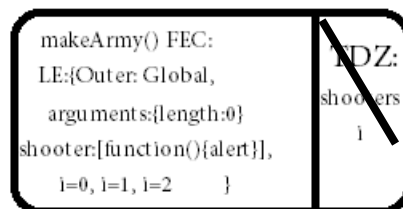
LE for LE of the while loop:

Creation phase

While-loop EC: LE:{Outer: makeArmy}	TDZ: shooter

Execution Phase

While-loop EC: LE:{Outer: makeArmy, shooter=function(){alert}	TDZ: shooter
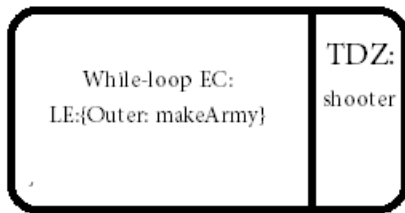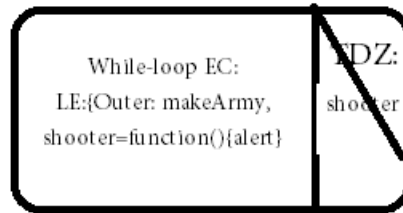
What will army[0] alert?   ➔ 2.

Fixing the code:

```
function makeArmy(){
      let shooters =[];
      let i=0;
      while(i<2){
            let temp = I;
            let shooter = function(){
                  alert(temp);
            };
            shooters.push(shooter);
            i++;
      }
      return shooters;
   }
   let army = makeArmy();
   army[0]();
```