Do chapter 5 Problems below

Here they are:

1. Dynamic type binding is closely related to implicit heap-dynamic variables. Explain this relationship.

2. Consider the following JavaScript skeletal program:

```
// The main program
var  x;
function  sub1() {
  var  x;
  function  sub2() {
    . . .
  }
}
function  sub3() {
  . . .
}
```

Assume that the execution of this program is in the following unit order:

   main calls sub1

   sub1 calls sub2

   sub2 calls sub3

   a. Assuming static scoping, in the following, which declaration of x is the correct one for a reference to x?

       i. sub1

       ii. sub2

       iii. sub3

   b. Repeat part a, but assume dynamic scoping.

3. Consider the following JavaScript program:

```
var  x, y, z;
function  sub1() {
  var  a, y, z;
  function sub2() {
    var  a, b, z;
    . . .
  }
  . . .
}
function  sub3() {
  var  a, x, w;
  . . .
}
```

List all the variables, along with the program units where they are declared, that are visible in the bodies of sub1, sub2, and sub3, assuming static scoping is used.