Lecture 20 Worksheet

Question 1

What Hack VM should the compiler produce for the following class Bob?

```
class Bob
{
        static int how_many_bobs, too_many_bobs ;
        static Array bob_who ;
        field string bobs_name ;

        constructor Bob baby_bob(string cool_name)
        {
                let bobs_name = cool_name ;
                return this ;
        }


        method string bobs_name()
        {
                return bobs_name ;
        }


        method void change_bobs_name(string cooler_name)
        {
                let bobs_name = cooler_name ;
                return ;
        }
}
```

VM Code:

Question 2

What Hack VM should the compiler produce for the following additions to class Bob?

VM Code:

```
function  void initialise_bobs(int overload)
{
        let how_many_bobs = 0 ;
        let too_many_bobs = overload ;
        let bob_who = Array.new(too_many_bobs) ;
        return ;
}



function int not_too_many()
{
        return how_many_bobs < too_many_bobs ;
}
```

Question 3

What Hack VM should the compiler produce for the following additions to class Bob?

VM Code:

```
function void remember_bob(Bob bob,String alias)
{
        if ( not_too_many() )
        {
                let bob_who[how_many_bobs] = bob.bobs_name() ;
                let how_many_bobs = how_many_bobs + 1;
                do bob.change_bobs_name(alias) ;
        }
        return ;
}
```