OOPf (TDA550)
Lösningsförslag: SI-Pass 6
https://github.com/epoxy/SIPass

Handledare: Anton Palmqvist
palmqvist.anton(SnabelA)gmail.com

1)

```
public class RacingTurtle extends Thread{
      private int walkedSteps;
      private String name;
      private volatile boolean running = true;
      public RacingTurtle(String name){
            this.name = name;
            walkedSteps = 0;
      }
      @Override
      public void run(){
            while(running) {
                  walkedSteps++;
                  System.out.println("" + name + " walked one step!
                        Total: " + walkedSteps);
                  if(walkedSteps==5){
                        System.out.println("" + name + " finished!");
                        terminate();
                  }
            }
      }
      public void terminate(){
            running = false;
      }
}

public class TurtleRace {
      public static void main(String[] args){
            RacingTurtle turtle1 = new RacingTurtle("Arne");
            RacingTurtle turtle2 = new RacingTurtle("Bob");
            turtle1.start();
            turtle2.start();
      }
}
```

2)

```
public class RacingTurtle extends Thread{
     private int walkedSteps;
     private String name;
     private volatile boolean running = true;
     public RacingTurtle(String name){
          this.name = name;
          walkedSteps = 0;
     }
     @Override
     public void run(){
          while(running) {
               walkedSteps++;
               System.out.println("" + name + " walked one step!
                    Total: " + walkedSteps);
               if(walkedSteps==5){
                    System.out.println("" + name + " finished!");
                    terminate();
               }
               Random randomizer = new Random();
               int randomTal = randomizer.nextInt(2);
               if(randomTal==0){
                    try{
                         sleep(2000);
                    }
                    catch(InterruptedException e){
                         System.out.println("Sleep error: " +
name);
                    }
               }
          }
     }
     public void terminate(){
          running = false;
     }
}
```

3)

```
public class CrazyHipsterCat extends HipsterCat implements Runnable{

    public CrazyHipsterCat(String name, int age, boolean
        hasGlasses) {
        super(name, age, hasGlasses);
    }

    @Override
    public void run() {
        while(getNbrOfLivesLeft()>0){
            Random randomizer = new Random();
            if(randomizer.nextDouble()<0.2){
                decrementLives();
                System.out.println("" + getName() + " lost a
                    life :(");
            }
        }
        System.out.println("" + getName() + " died X(");
    }

}

public class Main {
    public static void main(String[] args){
        CrazyHipsterCat chc1 = new CrazyHipsterCat("Sven", 12,
            true);
        CrazyHipsterCat chc2 = new CrazyHipsterCat("Per", 4,
            false);
        Thread catThread1 = new Thread(chc1);
        Thread catThread2 = new Thread(chc2);
        catThread1.start();
        catThread2.start();
    }
}
```

4)

```
public class Kitchen {
    private boolean thereAreCookies;
    public synchronized void bakeCookies(){
        while(thereAreCookies){
            try{
                wait();
            }
            catch(InterruptedException e){
                System.out.println("Bake-error");
            }
        }
        thereAreCookies = true;
        notifyAll();
    }
    public synchronized void eatCookies(){
        while(!thereAreCookies){
            try{
                wait();
            }
            catch(InterruptedException e){
                System.out.println("Eat-error");
            }
        }
        thereAreCookies = false;
        notifyAll();
    }
}
```

6)

```
public class PrinterClass {
    public static void main(String[] args) throws
        FileNotFoundException{
        PrintWriter pw = new PrintWriter("textfile.txt");
        pw.println("*******************************");
        pw.println("All your base are belong to us.");
        pw.println("*******************************");
        pw.close();
    }
}
```