```java
import java.util.concurrent.Semaphore;
import java.util.concurrent.TimeUnit;

public class a13 extends Thread {
    Semaphore toilet;
    Semaphore breakfast;
    Semaphore food;
    Semaphore drinks;
    Semaphore driveToSchool;
    Semaphore clearTable;
    String name;
    public a13(String nafn, Semaphore toil, Semaphore breakfast, Semaphore food,
        Semaphore drink, Semaphore drive, Semaphore table){
        this.name = nafn;
        this.toilet = toil;
        this.food = food;
        this.drinks = drink;
        this.driveToSchool = drive;
        this.clearTable = table;
        this.breakfast = breakfast;
    }

    @Override
    public void run(){
        if(name == "child"){
            try {
                toilet.acquire();
                useToilet(this.name);
                toilet.release();

                breakfast.acquire(2);
                haveBreakfast(this.name);
                driveToSchool.release(3);
                //System.out.println("end of child");
            } catch (InterruptedException e) {
                System.out.println(e);
            }

        }
        else if(name == "mother"){
            try {
                toilet.acquire();
                useToilet(this.name);
                toilet.release();

                drinks.acquire();
                prepareFood(this.name);
                System.out.println("Breakfast is ready!");

                breakfast.release(4);
                driveToSchool.acquire(4);
                takeAndDriveToSchool(this.name);
                //System.out.println("end of mother");
```

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            } catch (InterruptedException e) {
                System.out.println(e);
            }

        }
        else if(name == "father"){
            try {
                toilet.acquire();
                useToilet(this.name);
                toilet.release();

                prepareDrink(this.name);
                drinks.release();
                driveToSchool.acquire(2);
                clearTable(this.name);

                //System.out.println("end of father");
            } catch (InterruptedException e) {
                System.out.println(e);
            }

        }
    }

    public static void main(String[] args) {
        Semaphore toilet = new Semaphore(1);
        Semaphore food = new Semaphore(0);
        Semaphore drinks = new Semaphore(0);
        Semaphore breakfast = new Semaphore(0);
        Semaphore drive = new Semaphore(0);
        Semaphore table = new Semaphore(1);

        a13 child1 = new a13("child", toilet, breakfast, food, drinks, drive, table);
        a13 child2 = new a13("child", toilet, breakfast, food, drinks, drive, table);
        a13 father = new a13("father", toilet, breakfast, food, drinks, drive, table);
        a13 mother = new a13("mother", toilet, breakfast, food, drinks, drive, table);
        child2.start(); child1.start(); father.start(); mother.start();

        //System.out.println("in thread: " + Thread.currentThread().getName());
        try {
            child1.join(); child2.join(); father.join(); mother.join();

        } catch (InterruptedException e) {
            System.out.println(e);
        }
    }

    public void useToilet(String threadName){
        System.out.println(threadName + " is using the toilet!");
        // try {
        //     TimeUnit.SECONDS.sleep(1);
        // } catch (InterruptedException e) {
        //     System.out.println(e);
        // }
    }
    public void prepareFood(String threadName){
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            System.out.println(threadName + " is preparing food!");
            // try {
            //     TimeUnit.SECONDS.sleep(1);
            // } catch (InterruptedException e) {
            //     System.out.println(e);
            // }
        }
        public void prepareDrink(String threadName){
            System.out.println(threadName + " is preparing drinks!");
            // try {
            //     TimeUnit.SECONDS.sleep(1);
            // } catch (InterruptedException e) {
            //     System.out.println(e);
            // }
        }
        public void haveBreakfast(String threadName){
            System.out.println(threadName + " is having breakfast!");
            // try {
            //     TimeUnit.SECONDS.sleep(1);
            // } catch (InterruptedException e) {
            //     System.out.println(e);
            // }


        }
        public void takeAndDriveToSchool(String threadName){
            System.out.println(threadName + " is taking and driving the children to school!");
            // try {
            //     TimeUnit.SECONDS.sleep(1);
            // } catch (InterruptedException e) {
            //     System.out.println(e);
            // }
        }
        public void clearTable(String threadName){
            System.out.println(threadName + " is clearing the table!");
            // try {
            //     TimeUnit.SECONDS.sleep(1);
            // } catch (InterruptedException e) {
            //     System.out.println(e);
            // }
        }
    }
```

```
addi@addi:~/Desktop/Haskoli/Onn4/Styrikerfi/vika9$ java a13
child is using the toilet!
father is using the toilet!
child is using the toilet!
mother is using the toilet!
father is preparing drinks!
mother is preparing food!
Breakfast is ready!
child is having breakfast!
child is having breakfast!
father is clearing the table!
mother is taking and driving the children to school!
addi@addi:~/Desktop/Haskoli/Onn4/Styrikerfi/vika9$ java a13
child is using the toilet!
child is using the toilet!
father is using the toilet!
father is preparing drinks!
mother is using the toilet!
mother is preparing food!
Breakfast is ready!
child is having breakfast!
child is having breakfast!
father is clearing the table!
mother is taking and driving the children to school!
addi@addi:~/Desktop/Haskoli/Onn4/Styrikerfi/vika9$ java a13
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father is using the toilet!
child is using the toilet!
father is preparing drinks!
mother is using the toilet!
mother is preparing food!
Breakfast is ready!
child is having breakfast!
child is having breakfast!
father is clearing the table!
mother is taking and driving the children to school!
addi@addi:~/Desktop/Haskoli/Onn4/Styrikerfi/vika9$ java a13
child is using the toilet!
child is using the toilet!
mother is using the toilet!
father is using the toilet!
father is preparing drinks!
mother is preparing food!
Breakfast is ready!
child is having breakfast!
child is having breakfast!
father is clearing the table!
mother is taking and driving the children to school!
addi@addi:~/Desktop/Haskoli/Onn4/Styrikerfi/vika9$
```

```
addi@addi:~/Desktop/Haskoli/Onn4/Styrikerfi/vika9$ java a13
child is using the toilet!
father is using the toilet!
father is preparing drinks!
child is using the toilet!
mother is using the toilet!
mother is preparing food!
Breakfast is ready!
child is having breakfast!
child is having breakfast!
father is clearing the table!
mother is taking and driving the children to school!
addi@addi:~/Desktop/Haskoli/Onn4/Styrikerfi/vika9$ java a13
child is using the toilet!
child is using the toilet!
father is using the toilet!
mother is using the toilet!
father is preparing drinks!
mother is preparing food!
Breakfast is ready!
child is having breakfast!
child is having breakfast!
father is clearing the table!
mother is taking and driving the children to school!
```