



## Mesure du Temps de Parcours par RFID

SAPIENS/BINTI ABDULLAH  
Année 2011-Groupe Q2

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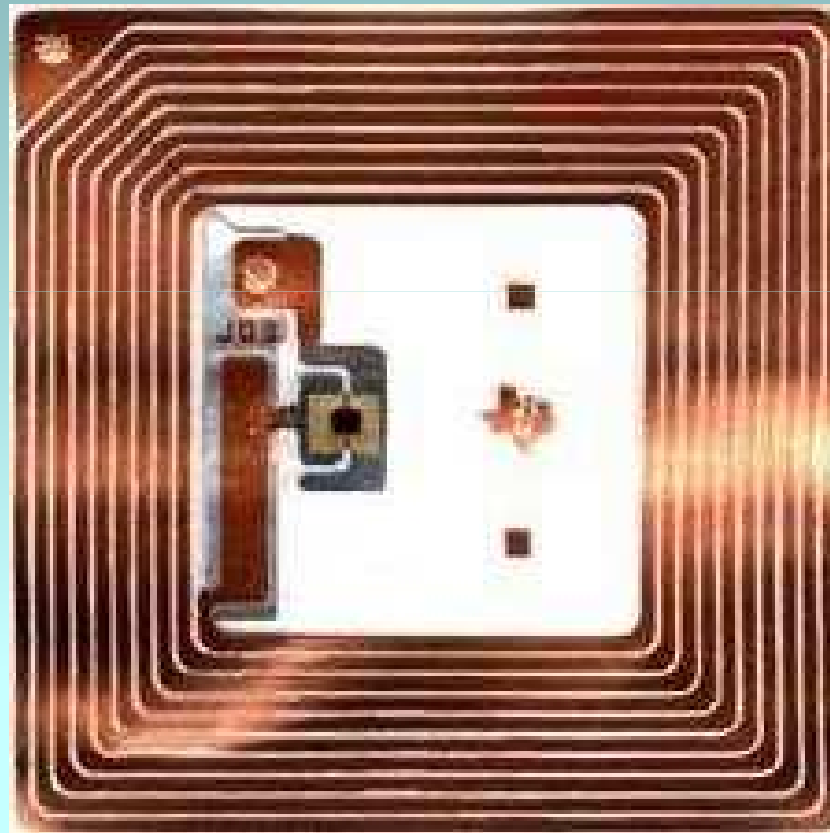
# Introduction

- I) Présentation
  - 1) Idée générale
  - 2) La RFID
  - 3) Cahier des charges
  
- II) Réalisation
  - 1) Les prototypes
  - 2) Les programmes de lecture et d'écriture
  - 3) Problèmes et Erreur rencontrés
  
- Conclusion

## Idée Générale



# La RFID



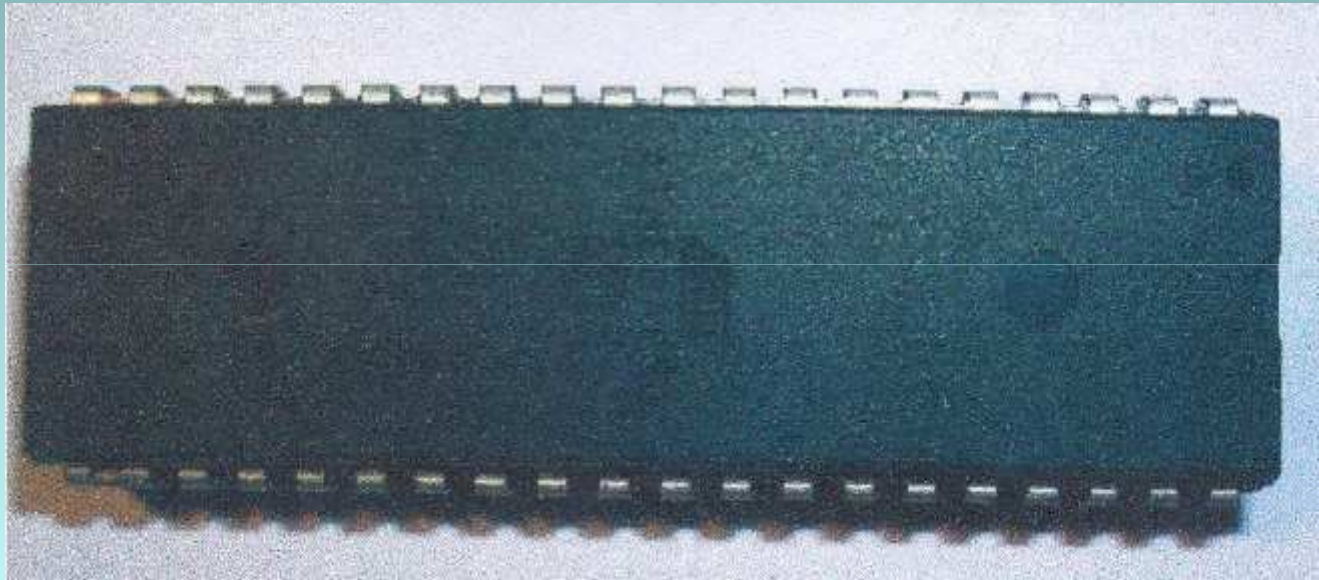
# Le Planning

|  | 38     | 39     | 40     | 41     | 42     | 43   | 44     | 45     | 46     | 47     | 48     | 49   | 50   | 51   | 52   | 1 | 2      | 3    |
|--|--------|--------|--------|--------|--------|------|--------|--------|--------|--------|--------|------|------|------|------|---|--------|------|
| Prise de connaissance du sujet             | Blue   | Blue   | Blue   |        |        | Grey |        |        |        |        |        |      |      | Grey | Grey |   |        |      |
| Étude des différentes solutions techniques | Yellow | Yellow |        |        |        | Grey |        |        |        |        |        |      |      | Grey | Grey |   |        |      |
| Choix des solutions techniques             |        |        | Blue   | Blue   |        | Grey |        |        |        |        |        |      |      | Grey | Grey |   |        |      |
| Étude du système                           |        |        |        | Blue   | Blue   |      | Blue   | Blue   |        |        |        |      |      | Grey | Grey |   |        |      |
| Mise en œuvre                              |        | Yellow | Yellow |        |        | Grey | Blue   | Blue   | Blue   | Blue   |        |      |      | Grey | Grey |   |        |      |
| Réalisation d'un prototype                 |        |        |        |        |        | Grey |        |        | Blue   | Blue   |        |      |      | Grey | Grey |   |        |      |
| Programmation                              |        |        |        |        |        | Grey |        |        |        | Blue   | Blue   |      |      | Grey | Grey |   |        |      |
| Mesures et tests                           |        |        |        | Yellow | Yellow |      | Yellow | Yellow | Yellow | Yellow | Yellow |      |      | Grey | Grey |   | Yellow |      |
| Rédaction du rapport                       |        |        |        |        |        | Grey |        |        |        |        |        | Blue | Blue |      |      |   | Blue   |      |
| Présentation orale                         |        |        |        |        |        | Grey |        |        |        |        |        |      |      | Grey | Grey |   |        | Blue |

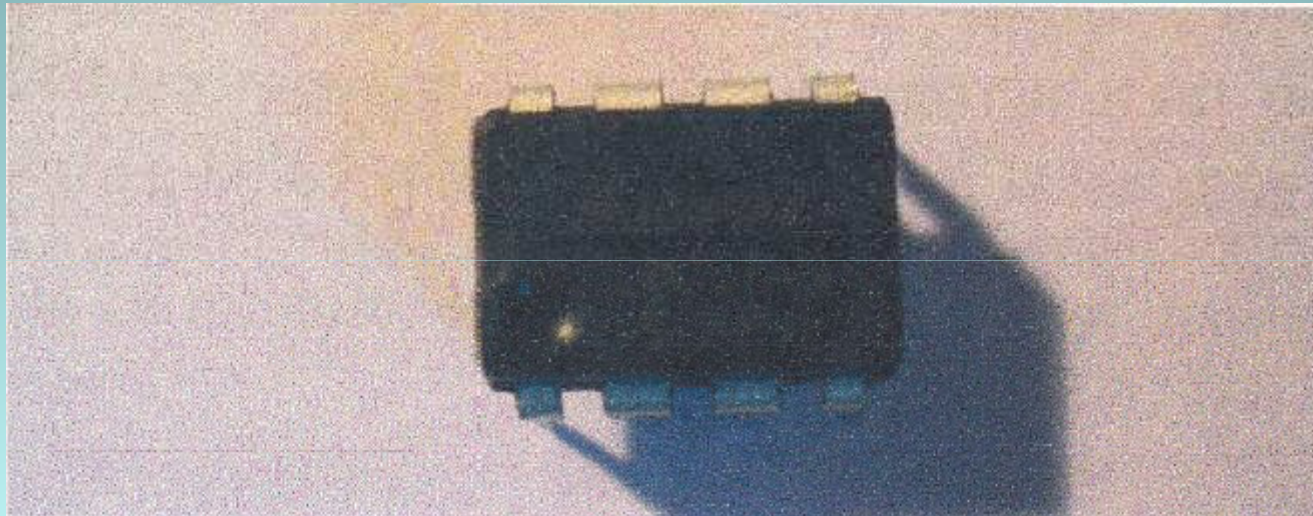
|        |                       |
|--------|-----------------------|
| Blue   | Planning prévisionnel |
| Yellow | Planning réel         |
| Green  | Séance libre          |
| Red    | Apprentissage Orcad   |

# Les principaux composants

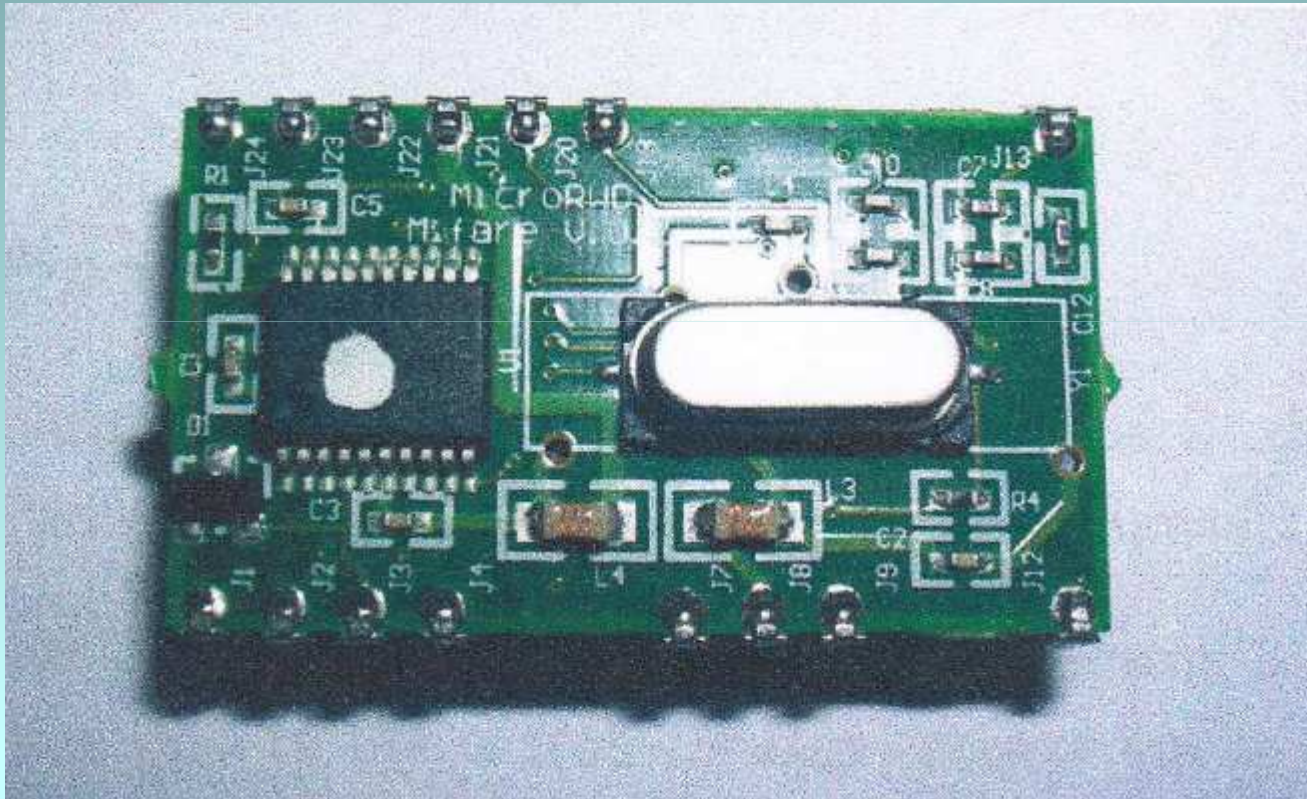
## 1) Le microcontrôleur ATMEGA 8535



## 2) Le régulateur de tension LM2574N-5

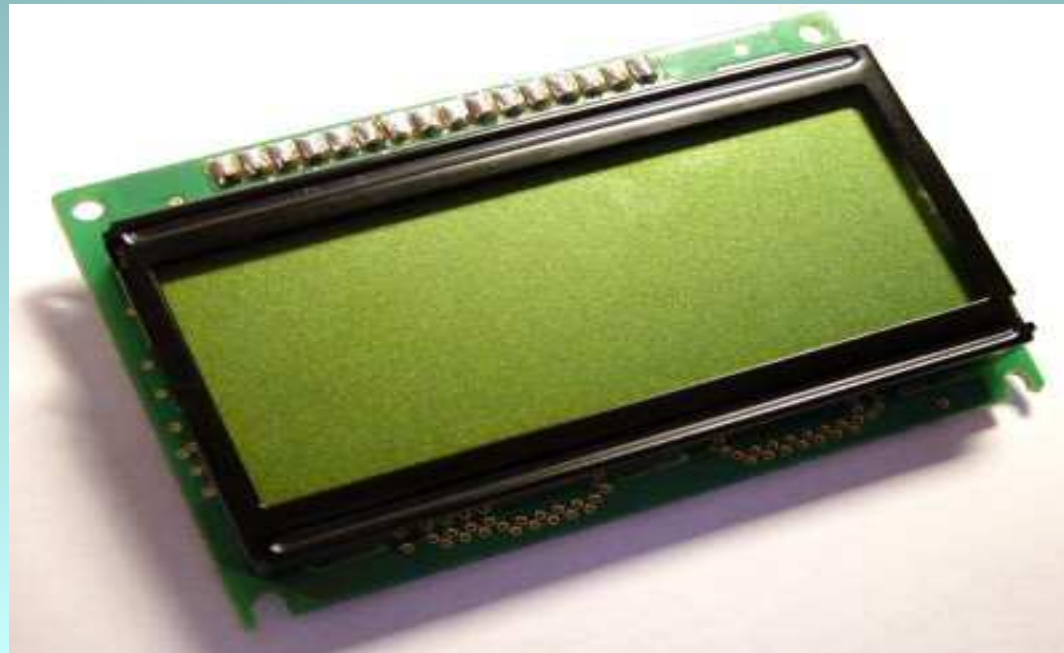


### 3) Le module RFID RWD MIFARE

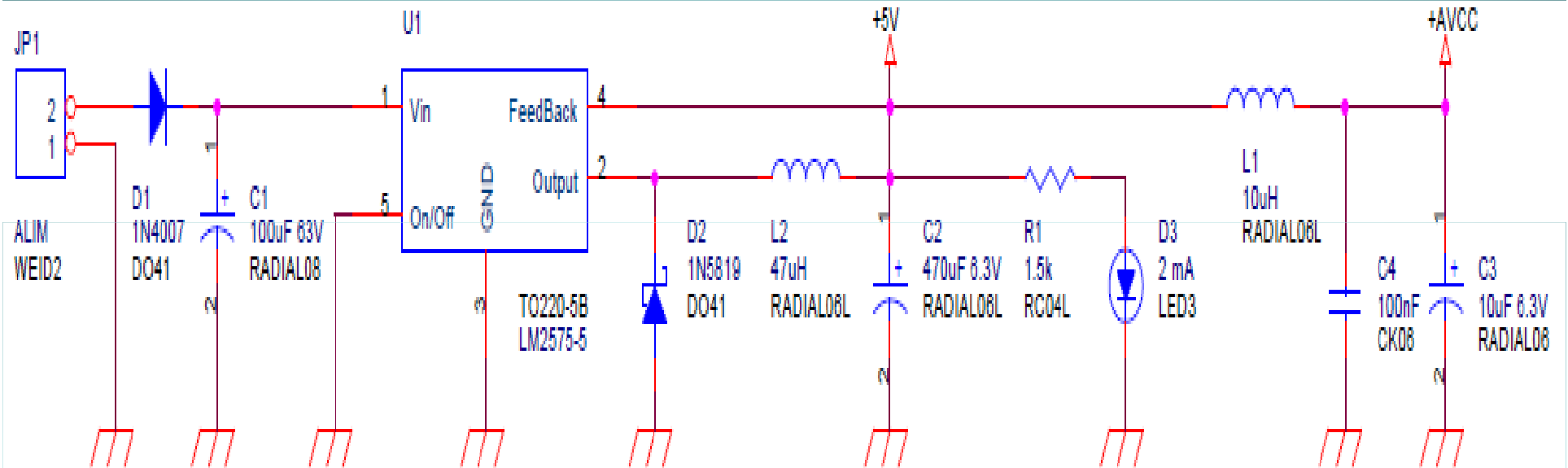




#### 4) L'afficheur 16X4 caractères

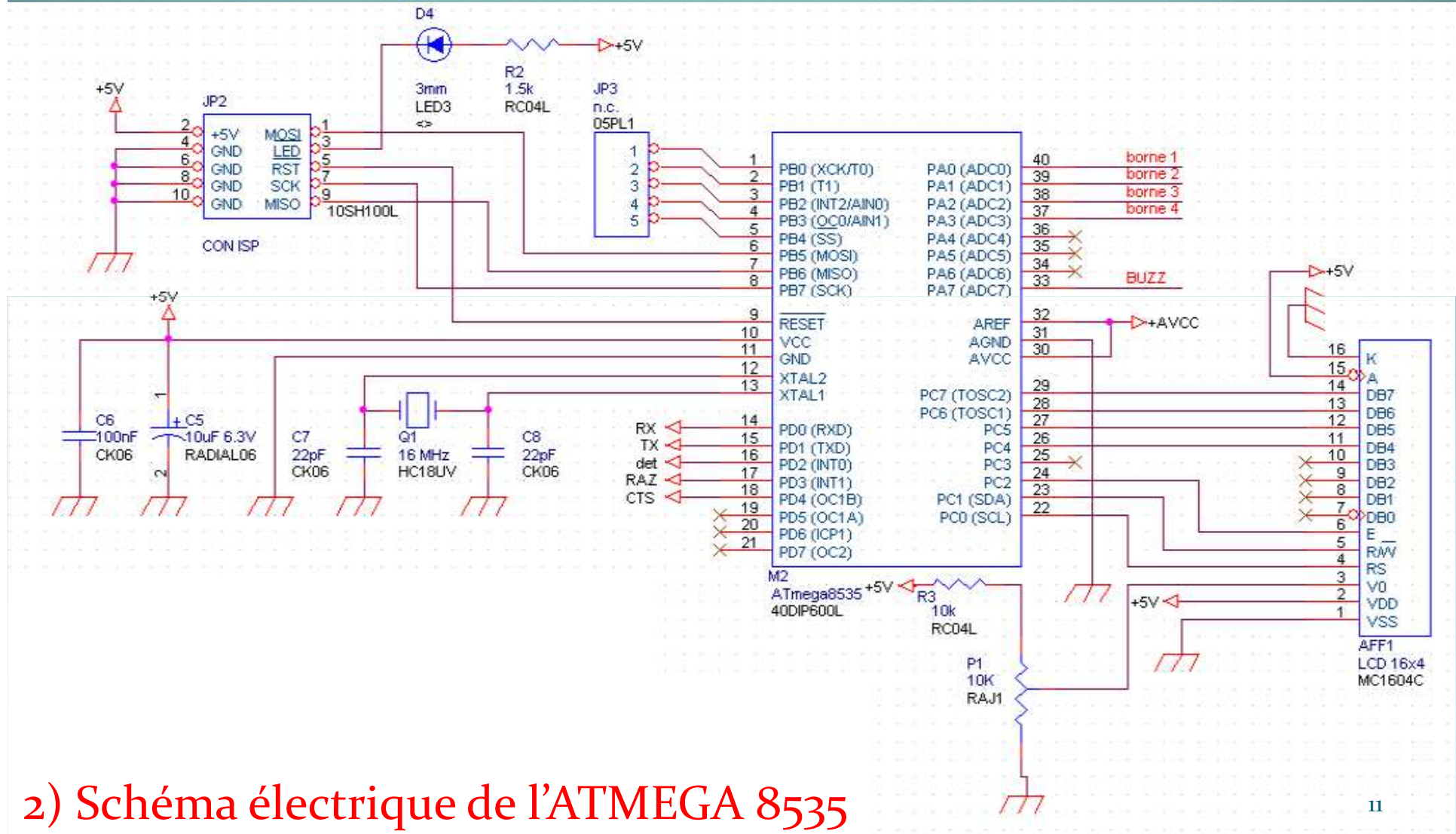


# Les Prototypes



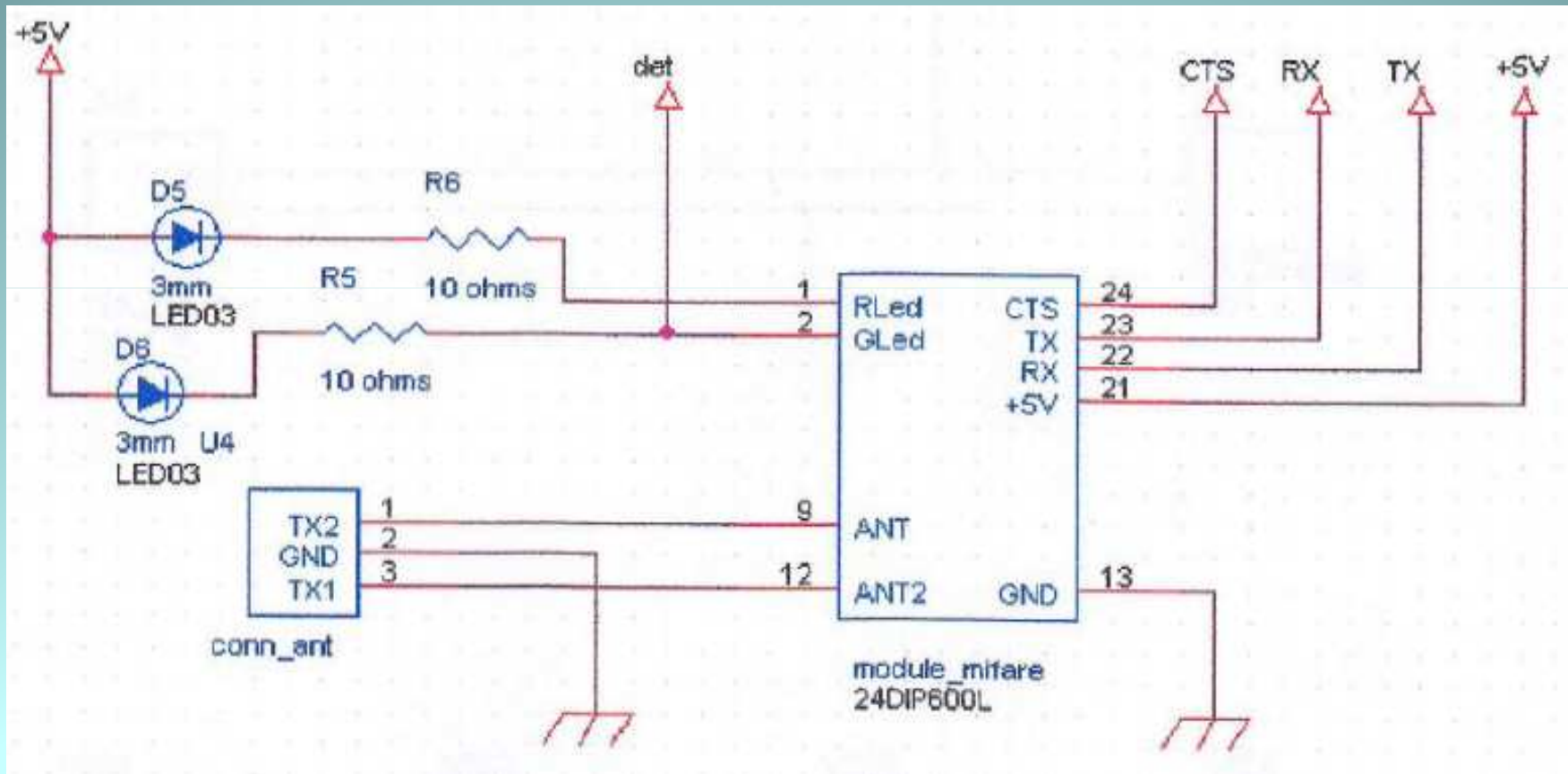
## 1) Schéma électrique du régulateur de tension

# Les Prototypes



2) Schéma électrique de l'ATMEGA 8535

# Les Prototypes



## 3) Schéma électrique du module RFID

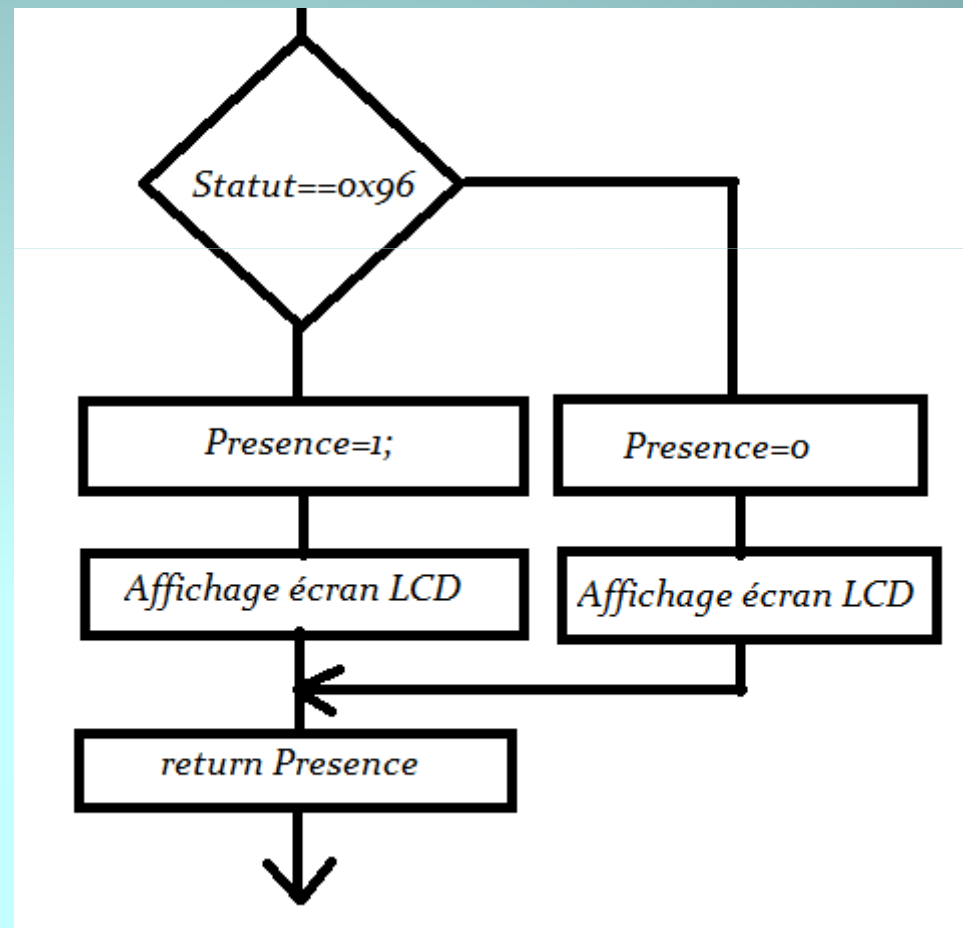
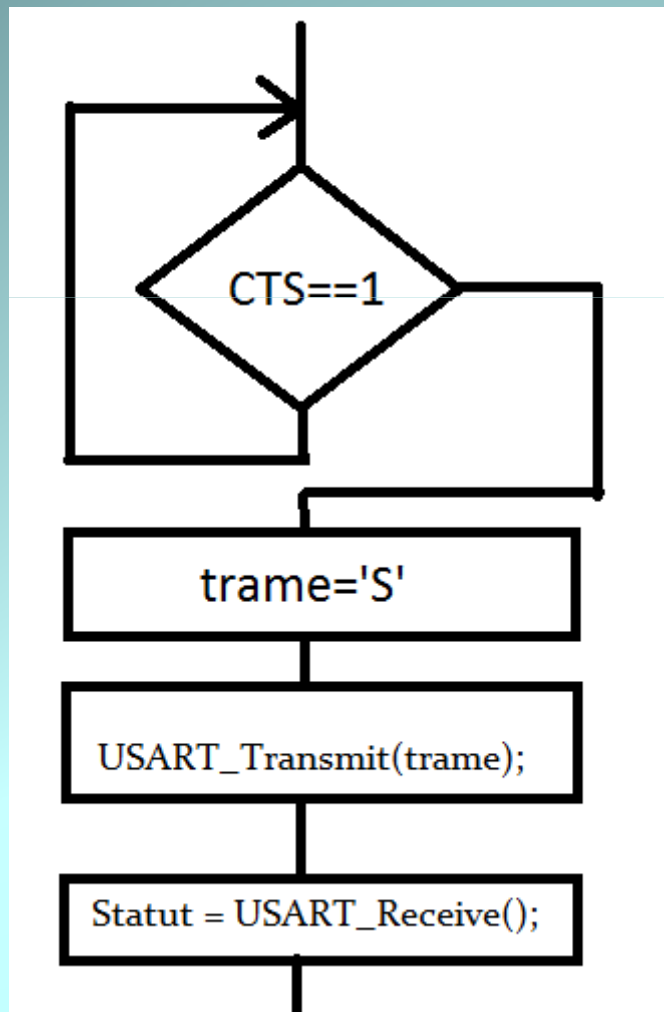
# Les Prototypes



4) La carte finale

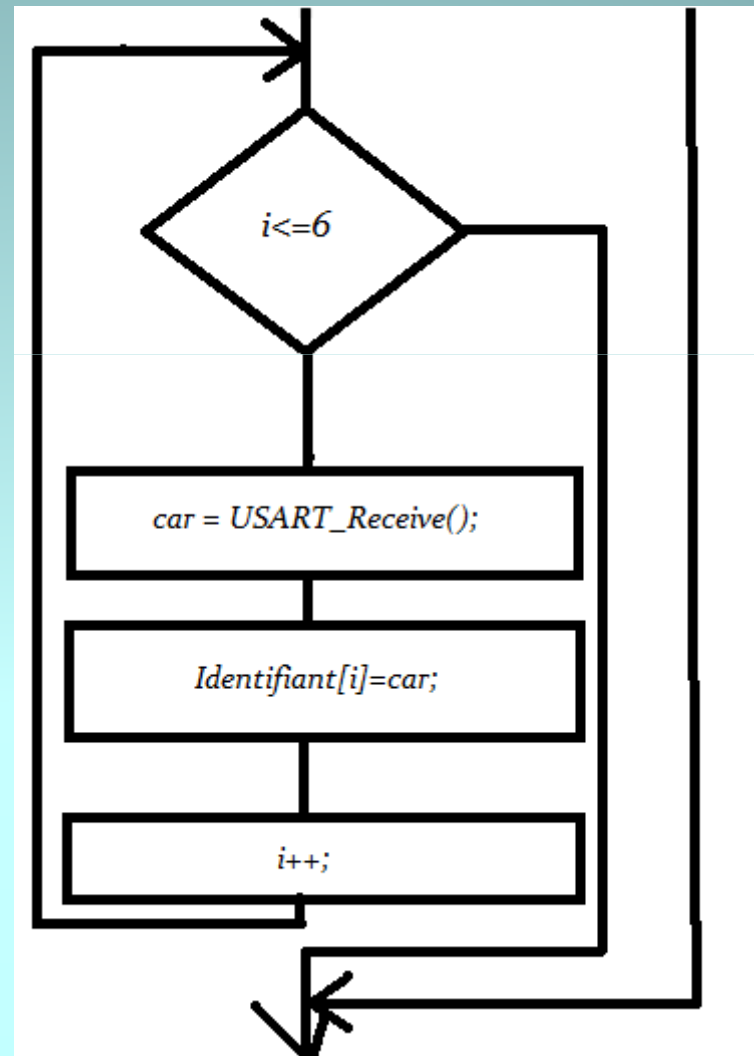
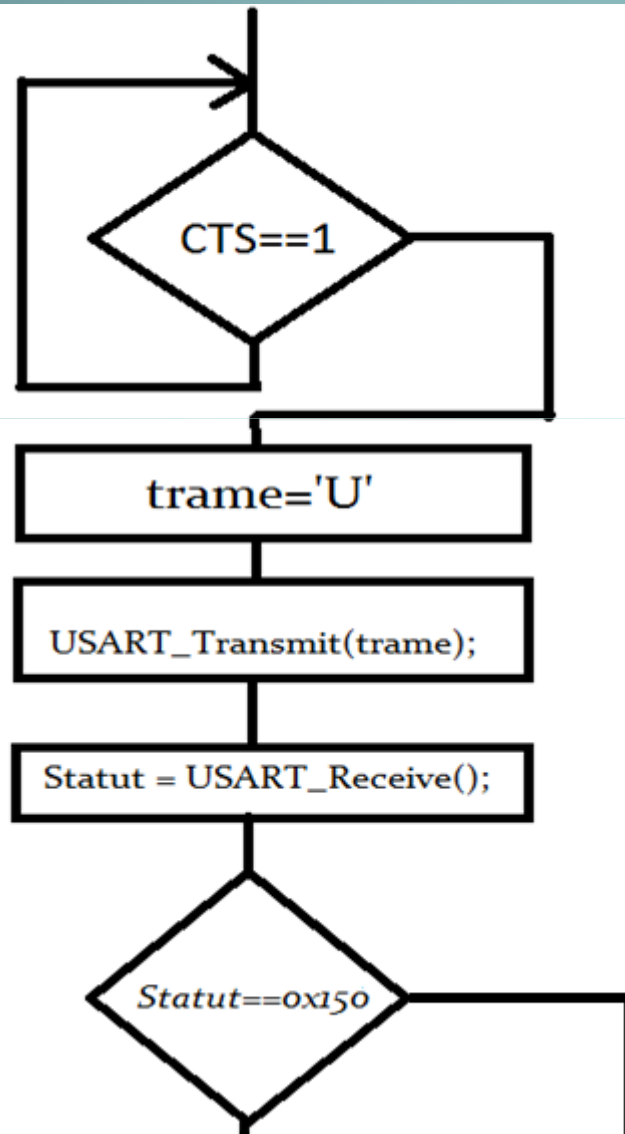
# Les Programmes (écriture)

## 1) Vérification du statut



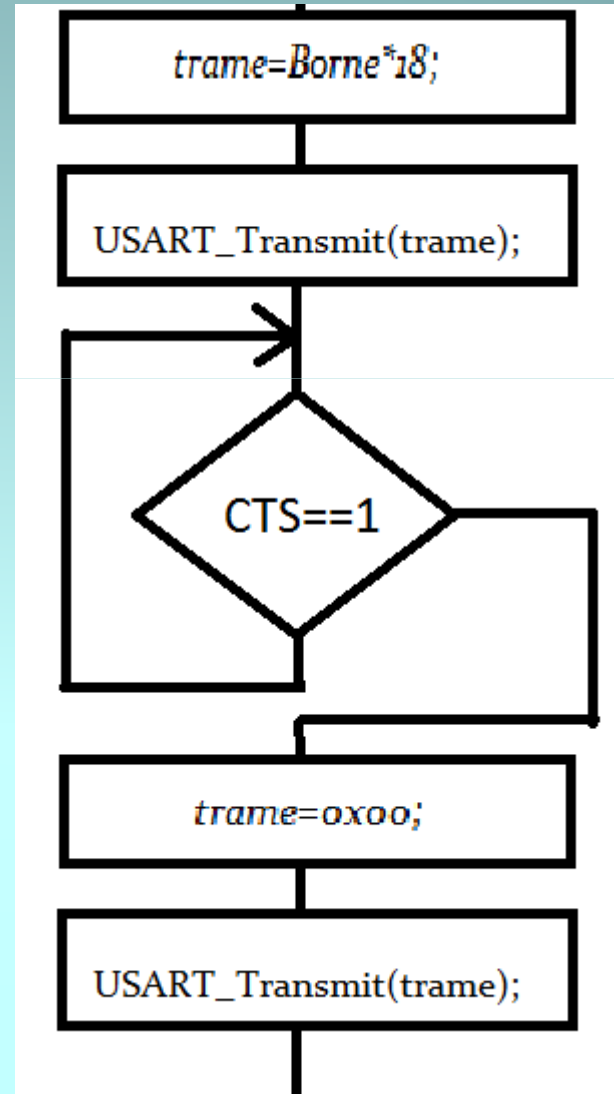
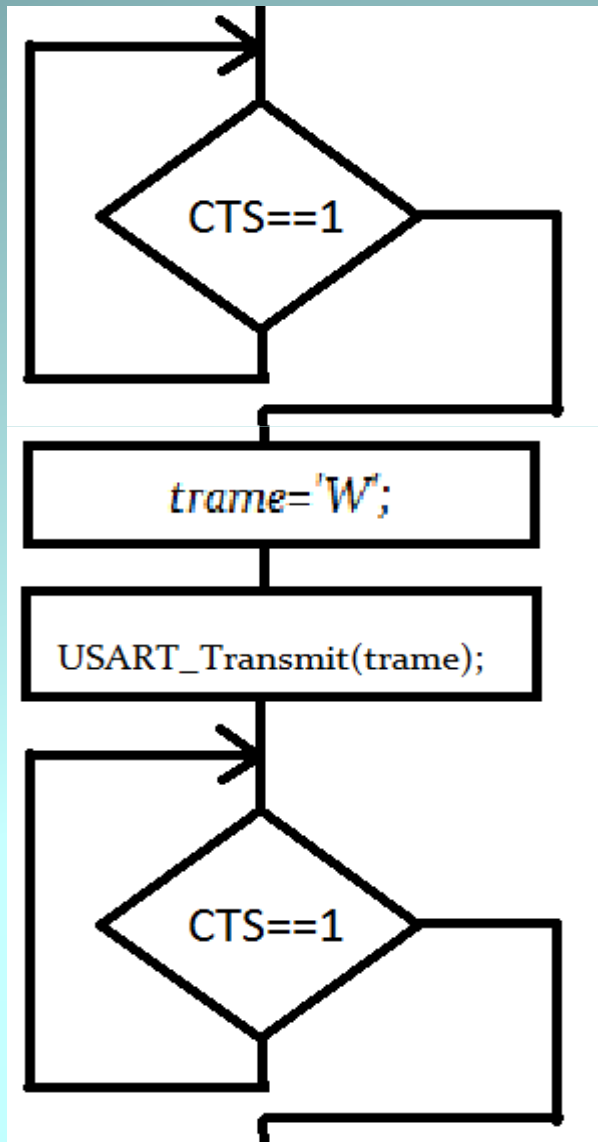
# Les Programmes (écriture)

## 2) Lecture de l'UID



# Les Programmes (écriture)

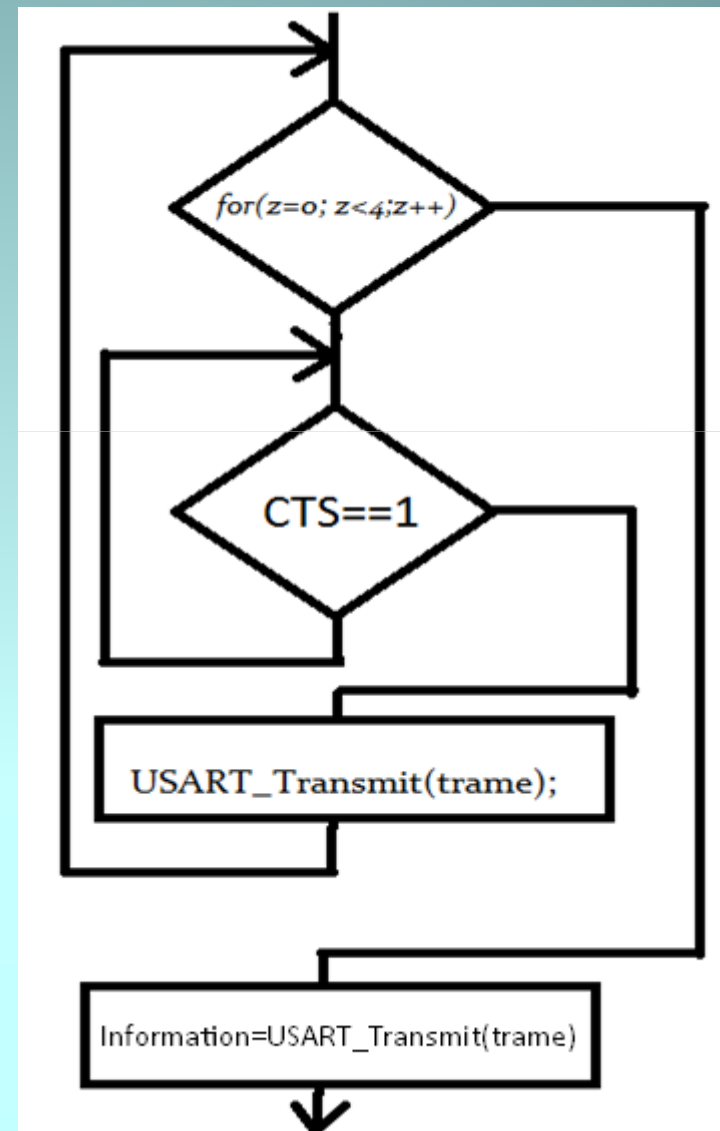
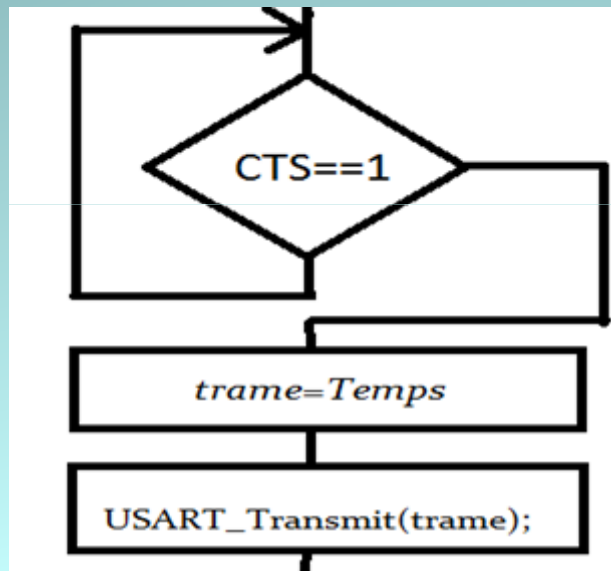
## 3) Ecriture





# Les Programmes (écriture)

## 3) Ecriture (suite)



# Les Programmes (écriture)

```
interrupt [TIM1_COMPA] void timer1_compa_isr(void)
{
    Temps++;
    if (Temps>=100)
    {
        Temps=0;
        Seconde++;
        if (Seconde>=60)
        {
            Seconde=0;
            Minute++;
            if (Minute>=60)
            {
                Minute=0;
                Heure++;
                if (Heure>=99)
                {
                    Heure=0;
                }
            }
        }
    }
}
```

# Les Programmes (écriture)

```
interrupt [EXT_INT1] void ext_int1_isr(void)  
{  
    Temps=0;  
    Seconde=0;  
    Minute=0;  
    Heure=0;  
}
```



# Les Programmes (lecture)

- `int VerifStatut (void);`
- `void Recoit_UID (void);`
- Fonction affichage:

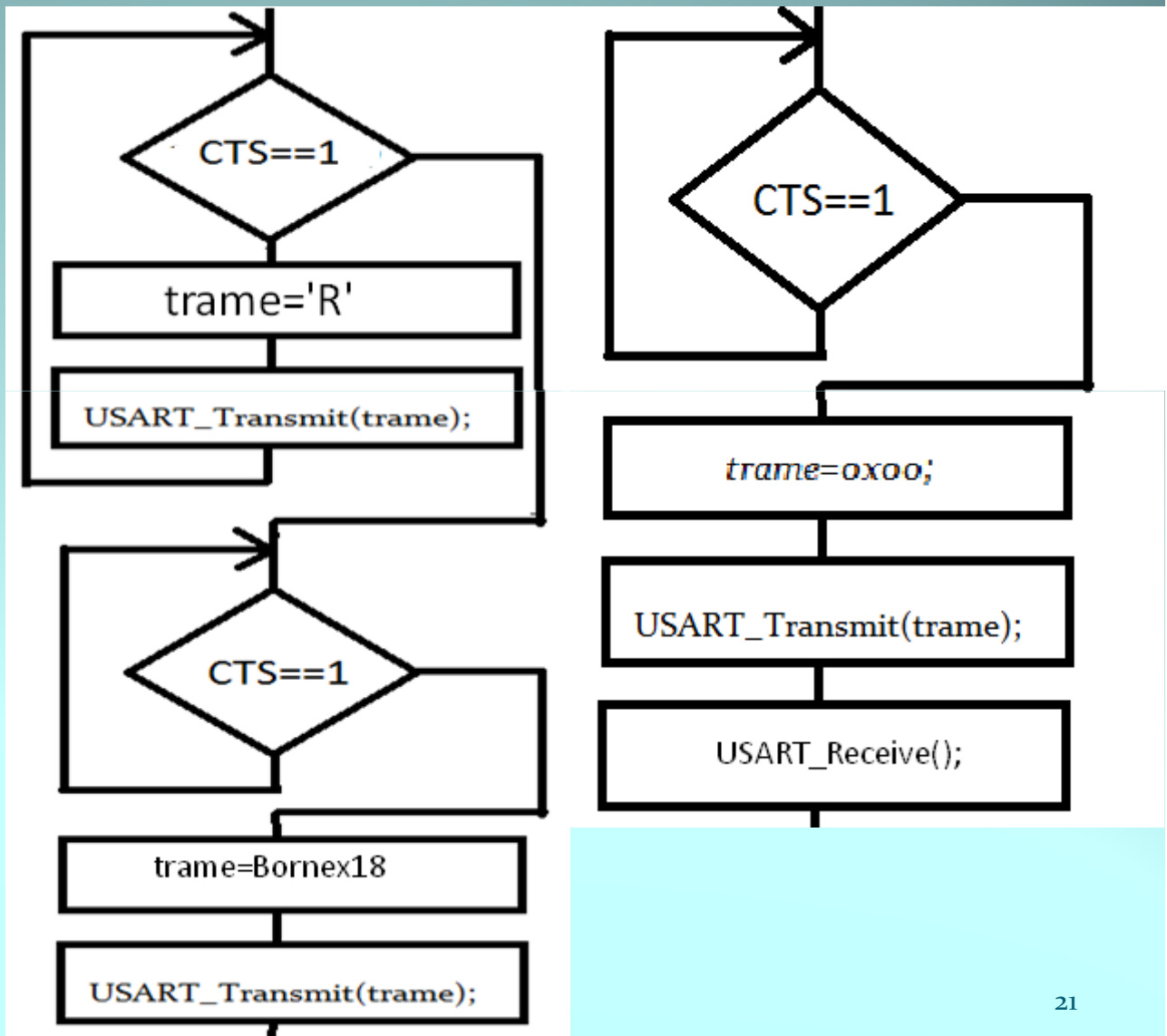
```
sprintf(tampon, "%03d", Temps[z]);
```

```
lcd_gotoxy(z*4, 1);
```

```
lcd_puts(tampon);
```

# Les Programmes (lecture)

```
void Recoit_Info (int Borne)
```



# Les Programmes (lecture)

```
Information = USART_Receive();
```

```
Information = (Information & 0xCF);
```

```
if(Information == 0x86)
```

```
{
```

```
    while(i<=15)
```

```
    {
```

```
        car = USART_Receive();
```

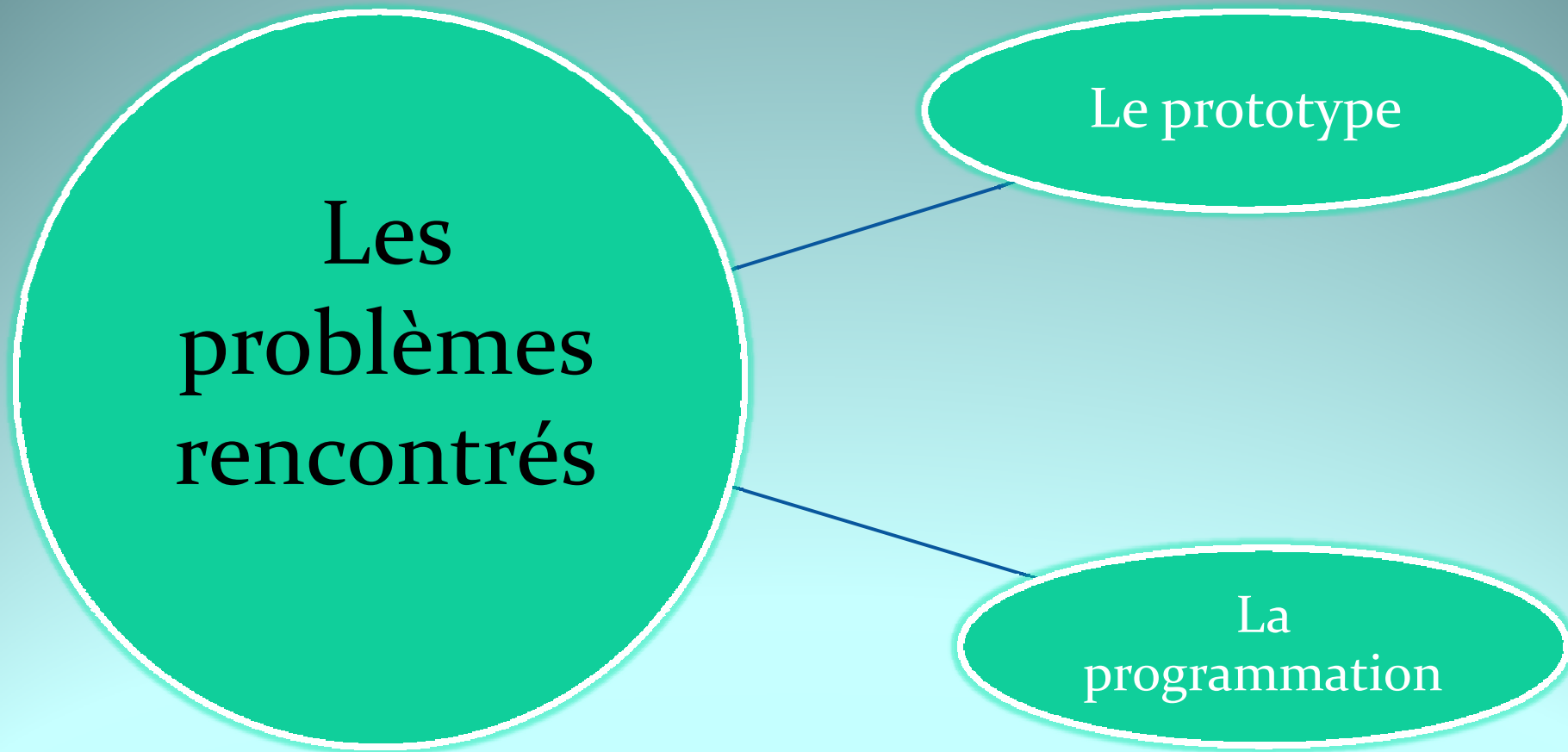
```
        Temps[i] = car;
```

```
        i++;
```

```
    }
```

```
}
```

```
}
```



# Conclusion