



Mindstorm





Sommaire

- ◇ Introduction
- ◇ Fonctionnalités
- ◇ Architecture, conception et gestion de projet
 - ◇ UML
 - ◇ Planning et répartition des tâches
 - ◇ Difficultés rencontrées et solutions apportées
- ◇ Programmation
 - ◇ Exemple de code, étalonnage ?
- ◇ Conclusion

A decorative graphic on the left side of the slide. It features a large, central blue hexagon with a white number '1' inside. Surrounding this central hexagon are several smaller hexagons of varying shades of blue and teal. Some of these smaller hexagons contain white icons: a lightbulb, a thumbs-up, a smartphone, a magnifying glass, and a gear. There is also a network-like icon with a central node and several smaller nodes connected by lines.

1

Introduction



1. Introduction

- ◇ Robot suiveur de ligne
- ◇ Avenir de la logistique



A decorative graphic on the left side of the slide. It features a large central hexagon with a blue-to-teal gradient, containing the white number '2'. Surrounding this central hexagon are several smaller hexagons of varying shades of blue and teal. Some of these smaller hexagons contain white icons: a lightbulb, a thumbs-up, a smartphone, a magnifying glass, and a gear. There is also a network-like icon with a central node and radiating lines, and a speech bubble icon.

2

Fonctionnalités



2. Fonctionnalités

Les différentes fonctionnalités du robot

- ◇ L'étalonnage
- ◇ Les parcours
- ◇ Les codes couleurs

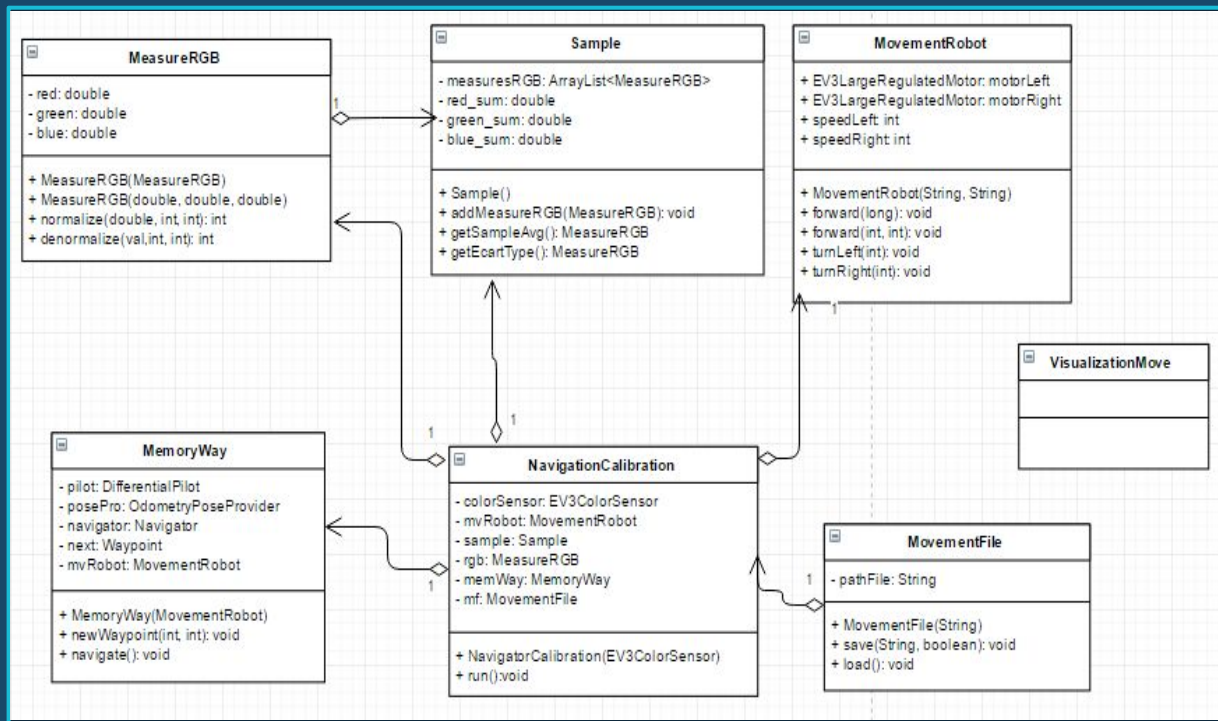


A decorative graphic on the left side of the slide. It features a large central hexagon with a blue-to-teal gradient, containing the white number '3'. Surrounding this central hexagon are several smaller hexagons of varying shades of blue and teal. Some of these smaller hexagons contain white icons: a lightbulb, a thumbs-up, a smartphone, a magnifying glass, and a gear. There is also a network-like icon with three nodes and a speech bubble icon.

3

Architecture, conception et gestion de projet


3. Architecture, conception et gestion de projet: UML





3. Architecture, conception et gestion de projet

Planning et répartition des tâches



Etalonnage
(1-2 mois)

**Parcours du
robot
(tout au long de
l'année)**

Codes couleurs
(2 semaines)
Virages serrés
(1 mois)



3. Architecture, conception et gestion de projet

Difficultés rencontrées et solutions apportées

- ◇ Étalonnage
- ◇ Virages serrés
- ◇ Trou sur la ligne



A decorative graphic on the left side of the slide. It features a large central hexagon with a blue-to-cyan gradient, containing the white number '4'. Surrounding this central hexagon are several smaller hexagons of varying shades of blue and cyan. Some of these smaller hexagons contain white icons: a lightbulb, a thumbs-up, a smartphone, a magnifying glass, and a gear. There is also a network-like icon with a central node and several smaller nodes connected by lines.

4

Programmation

4. Programmation

Exemple de code : l'étalonnage

```
// COND. 1 : ETALONNAGE
if(Button.UP.isDown()){
    LCD.drawString("ETALONNAGE: CHEMIN", 0, 3);
    while(Button.UP.isUp()){
        if(i==0){
            // COULEUR CHEMIN (VERT OU NOIR)
            if(Button.LEFT.isDown()){
                LCD.drawString("CHEMIN .. < PR EXT", 0, 3);
                do{
                    int sampleSize = colorRGB.sampleSize();
                    float[] sampleRGB = new float[sampleSize];
                    colorRGB.fetchSample(sampleRGB, 0);
                    MeasureRGB m = new MeasureRGB((double) sampleRGB[0], (double) sampleRGB[1], (double) sampleRGB[2]);
                    Sound.beep();
                    m.setRed(m.denormalize(m.getRed(), 0, 255));
                    m.setGreen(m.denormalize(m.getGreen(), 0, 255));
                    m.setBlue(m.denormalize(m.getBlue(), 0, 255));
                    sampleMain.addMeasureRGB(m);
                    mainMin.setRed(sampleMain.getSampleAvg().getRed() - sampleMain.getEcartType().getRed() - ec);
                    mainMax.setRed(sampleMain.getSampleAvg().getRed() + sampleMain.getEcartType().getRed() + ec);
                    mainMin.setGreen(sampleMain.getSampleAvg().getGreen() - sampleMain.getEcartType().getGreen() - ec);
                    mainMax.setGreen(sampleMain.getSampleAvg().getGreen() + sampleMain.getEcartType().getGreen() + ec);
                    mainMin.setBlue(sampleMain.getSampleAvg().getBlue() - sampleMain.getEcartType().getBlue() - ec);
                    mainMax.setBlue(sampleMain.getSampleAvg().getBlue() + sampleMain.getEcartType().getBlue() + ec);
                }while(Button.RIGHT.isUp());
                i++;
            }
        }else if(i==1){
            // COULEUR EXTERIEUR CHEMIN (BLANC)
```

A decorative graphic on the left side of the slide. It features a large central hexagon with a blue-to-cyan gradient, containing the number '5'. Surrounding this central hexagon are several smaller hexagons of varying shades of blue and cyan. Some of these smaller hexagons contain white icons: a lightbulb, a thumbs-up, a smartphone, a magnifying glass, and a gear. There is also a network-like icon with a central node and radiating lines, and a speech bubble icon.

5

Conclusion

5. Conclusion

Conclusion

- ◇ Découverte de la robotique
- ◇ Une version ultérieure





Merci de votre
attention !

Des questions ?

