07.03.2022 Christian STEFFEN &   
Ayman MIRI

***2. Semester:   
7 Controlling a steppermotor***

**Project planning:**

**Contents:**

1. **Materiallist**
2. **Softwares**
3. **Timeplanning**
4. **Theory**
   1. **Run a Stepmotor**
   2. **Circuit plans**
   3. **Program**
5. **Building the case**
6. **Look**
7. **Problemsolving**
8. **Sources**

1. **Materiallist:**

|  |  |  |
| --- | --- | --- |
| Equipment: | Type: | x |
| Arduino Uno |  | 1 |
| Stepping Motor | SM-17HS4023 | 1 |
| Driver | LM-298\_H\_Bridge | 1 |
| Power-supply | MW MB10EU  12V | 1A | 12W max. | 1 |
| USB cable | Typ B | 1 |
| Jumper cable | Typ: Male/Male | x |
| Jumper cable | Typ: Female/Male | x |
| Button | Typ: Push-Button | 5 |
| OLED-Display | ADA938 OLED 128x64 | 1 |
|  |  | 1 |

1. **Software:**

|  |  |
| --- | --- |
| Arduino | V: 1.8.13 |
| Eagle | V: 9.6.2 |
|  |  |

1. **Timeplanning:**

|  |  |
| --- | --- |
| 28.02.2022 | Preparation of materiallist |
| 07.03.2022 | Discussion over the material |
| 14.03.2022 | Clarify usage of the materials |
| 21.03.2022 | Plan the circuit & writing program |
| 28.03.2022 | Plan the circuit & writing program |
| 25.04.2022 | Testing the circuit |
| 02.05.2022 | Writing report |
| 16.05.2022 | Insert the circuit in the construction |
| 30.05.2022 | Preparation of the report |
| 13.06.2022 | Discuss the report |
| 20.06.2022 | Discussion over the project & report |
| 27.06.2022 | Presentation |

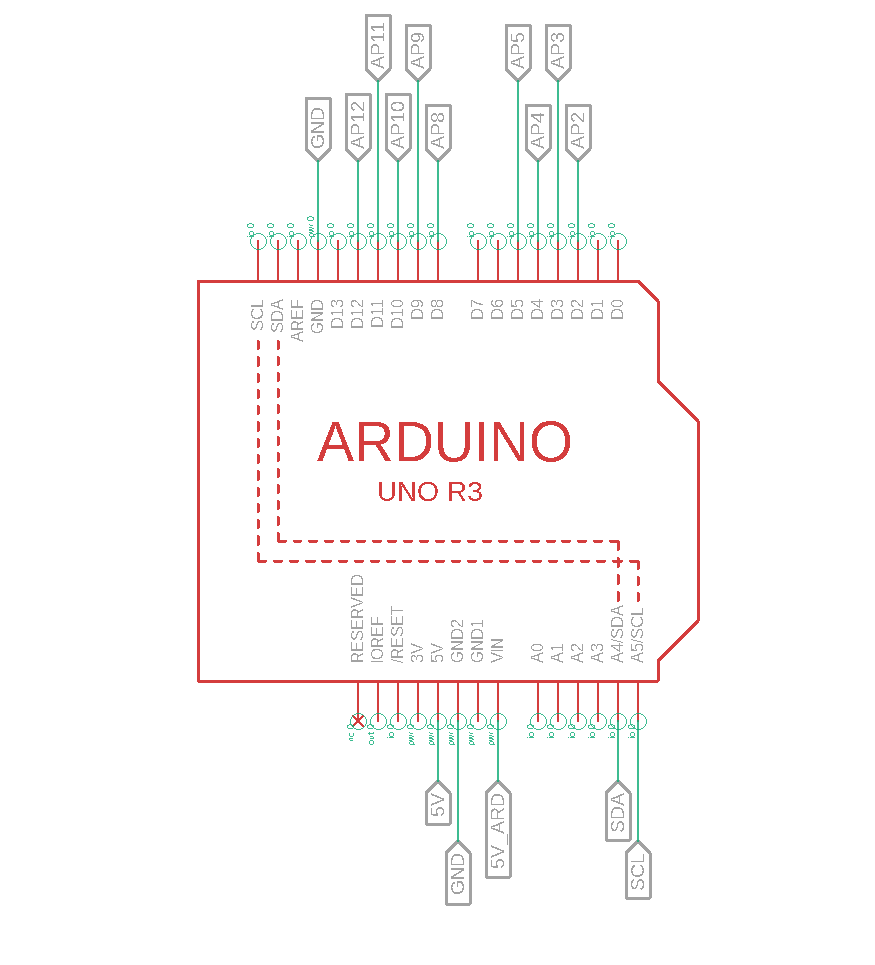
1. **Theory:**

**IV.a Title:**

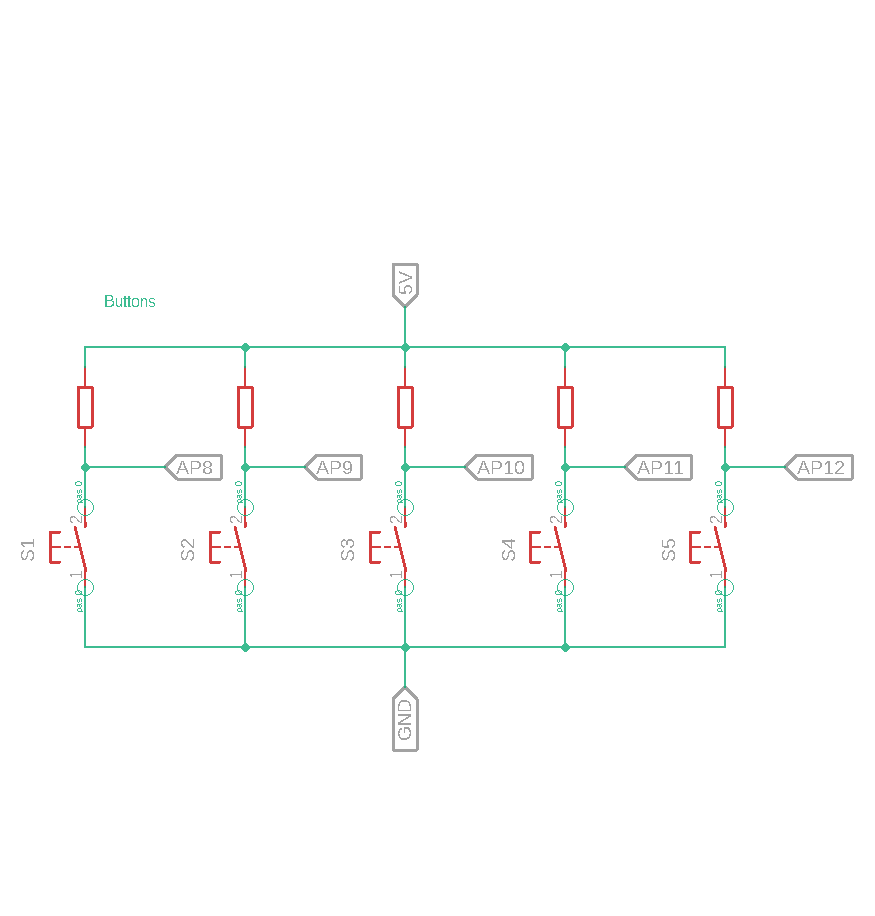
**IV.b Circuit plans:**

**Arduino Uno connecting plan:**

|  |  |
| --- | --- |
| Powersupply: | 5V\_ARD |
| Supply for components: | 5V (intern Arduino) |
| Ground | GND |
| AP# | Arduino Pin Nr. |

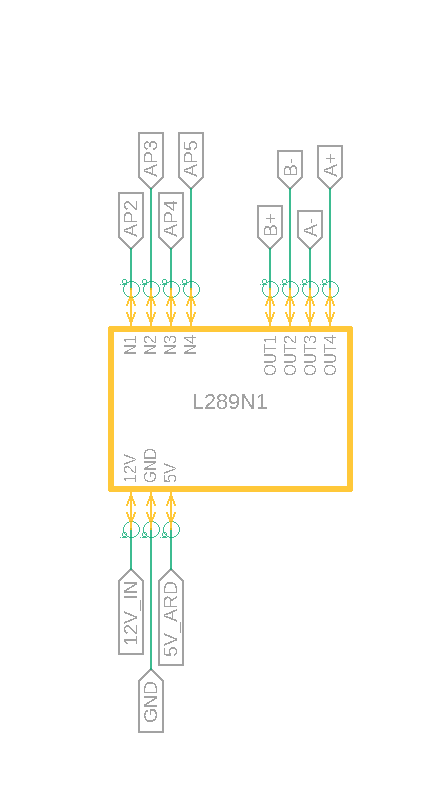
**Buttons Connecting plan:**

|  |  |
| --- | --- |
| Supply | 5V (intern Arduino) |
| Ground | GND |
| AP# | Arduino Pin Nr. |

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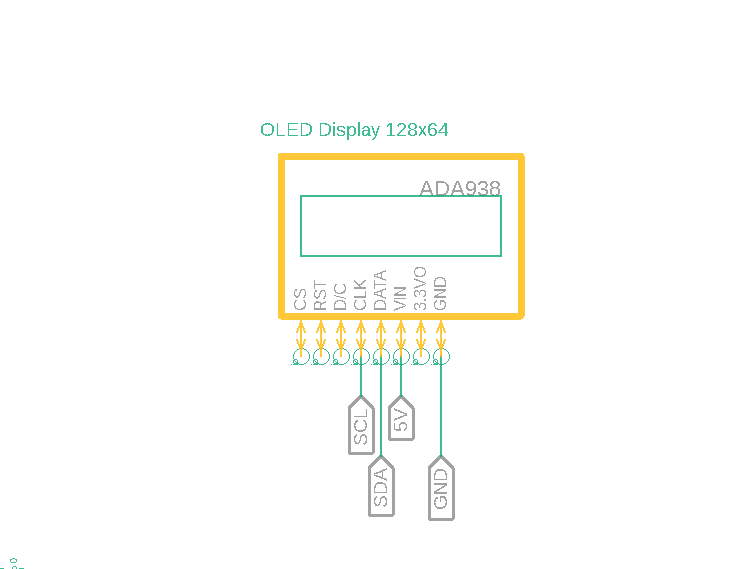
**L289N1 connecting plan:**

|  |  |
| --- | --- |
| Supply | 12V (intern Arduino) |
| Supply | 5V  (intern Driver) |
| Ground | GND |
| AP# | Arduino Pin Nr. |
| Motor Pin | A+ |
| Motor Pin | A- |
| Motor Pin | B+ |
| Motor Pin | B- |

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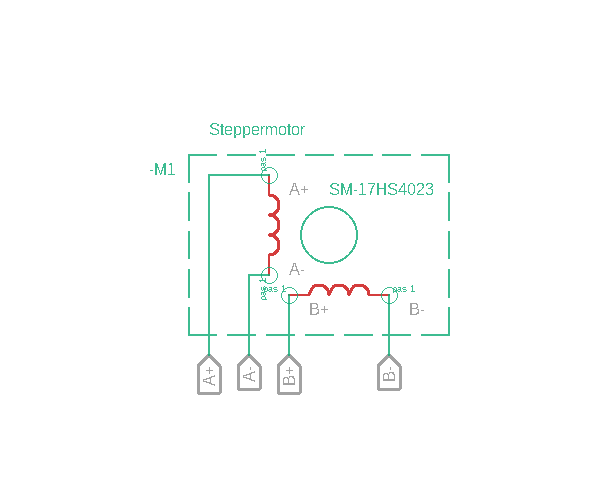
**Oled Display:**

|  |  |
| --- | --- |
| Supply | 5V  (intern Arduino) |
| Ground | GND |
| Data | SDA |
| CLK | SCL |

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**Steppermotor connecting plan:**

|  |  |
| --- | --- |
| Motorpins: | A+ |
|  | A- |
|  | B+ |
|  | B- |

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