SISTEM KOMUNIKASI NIRKABEL
MODUL 6

PEMROGRAMAN API SINGLE BOARD COMPUTER (SBC) INTERNET OF THINGS BERBASIS PACKET TRACER

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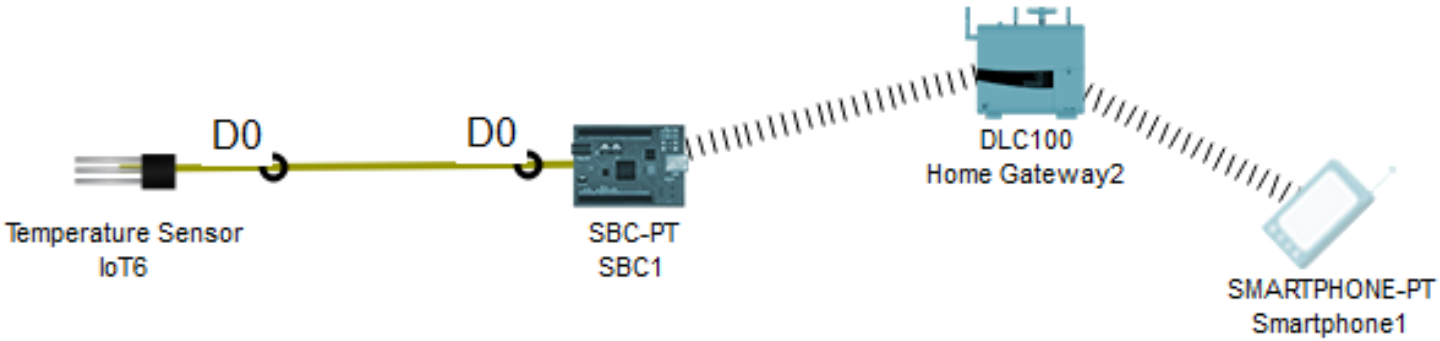
TOPIK BAHASAN

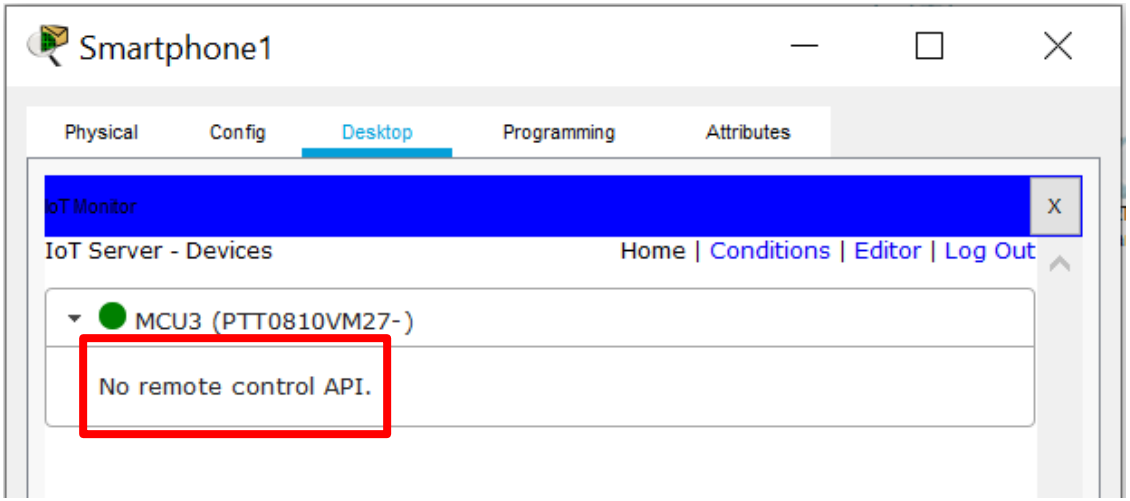
- SBC API PYTHON
- SETTING ENVIRONMENT

SBC API PYTHON

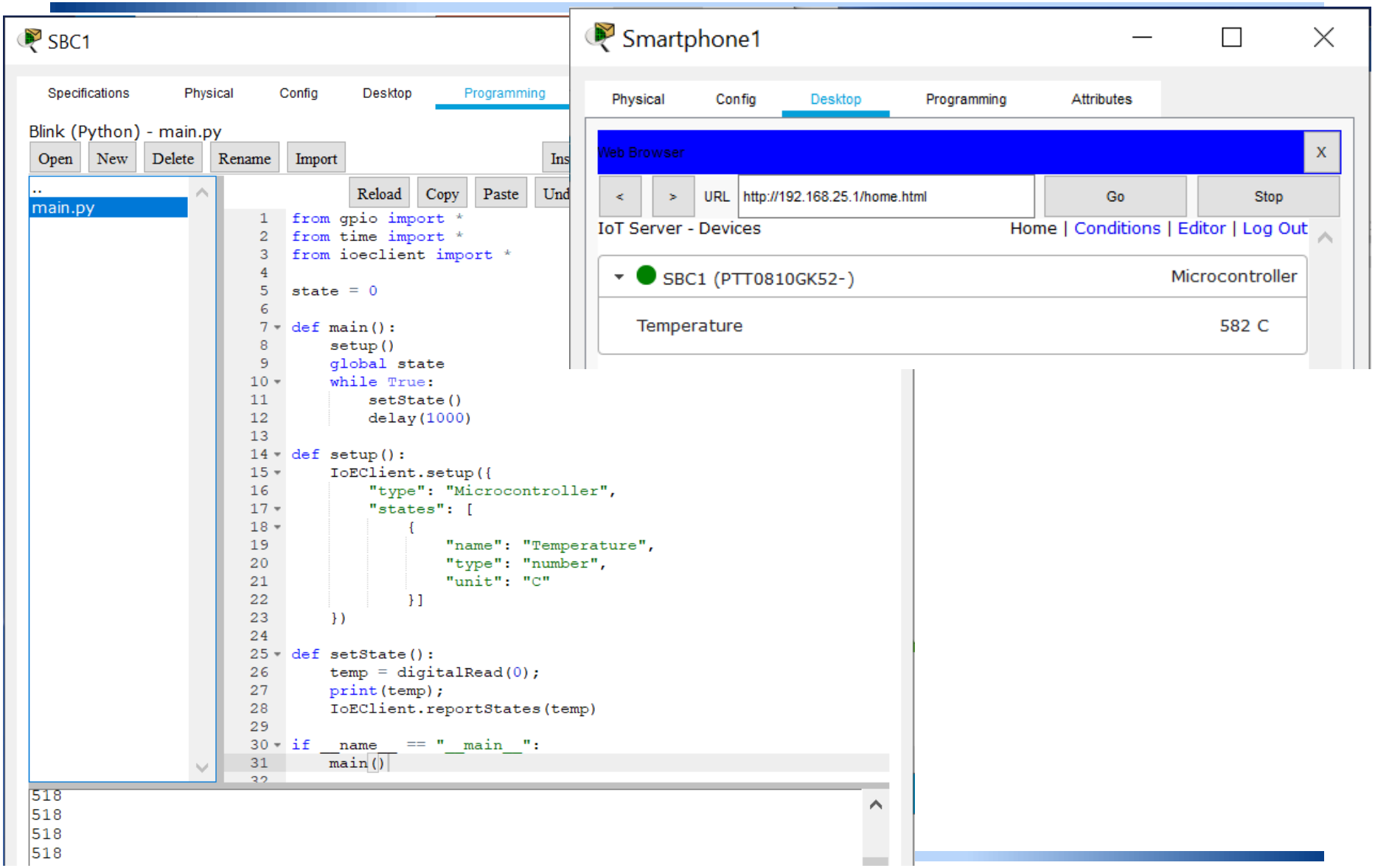
Topologi Jaringan

- Designlah jaringan seperti berikut:

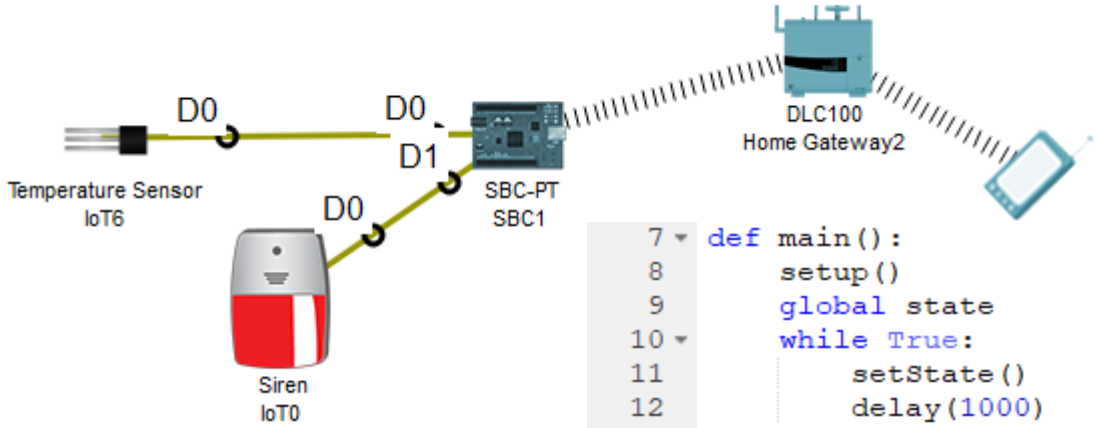




Python Programming di SBC



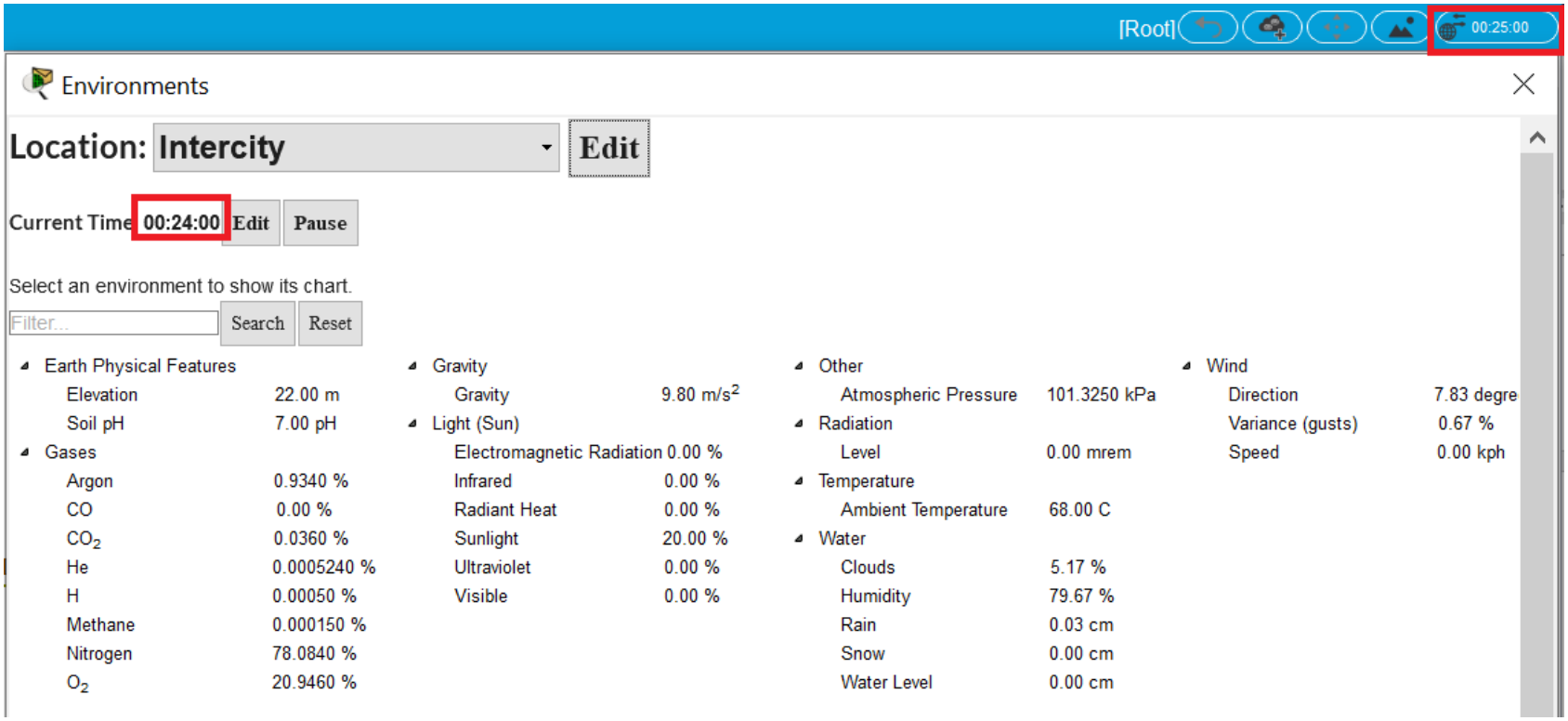
Dengan Aktuator



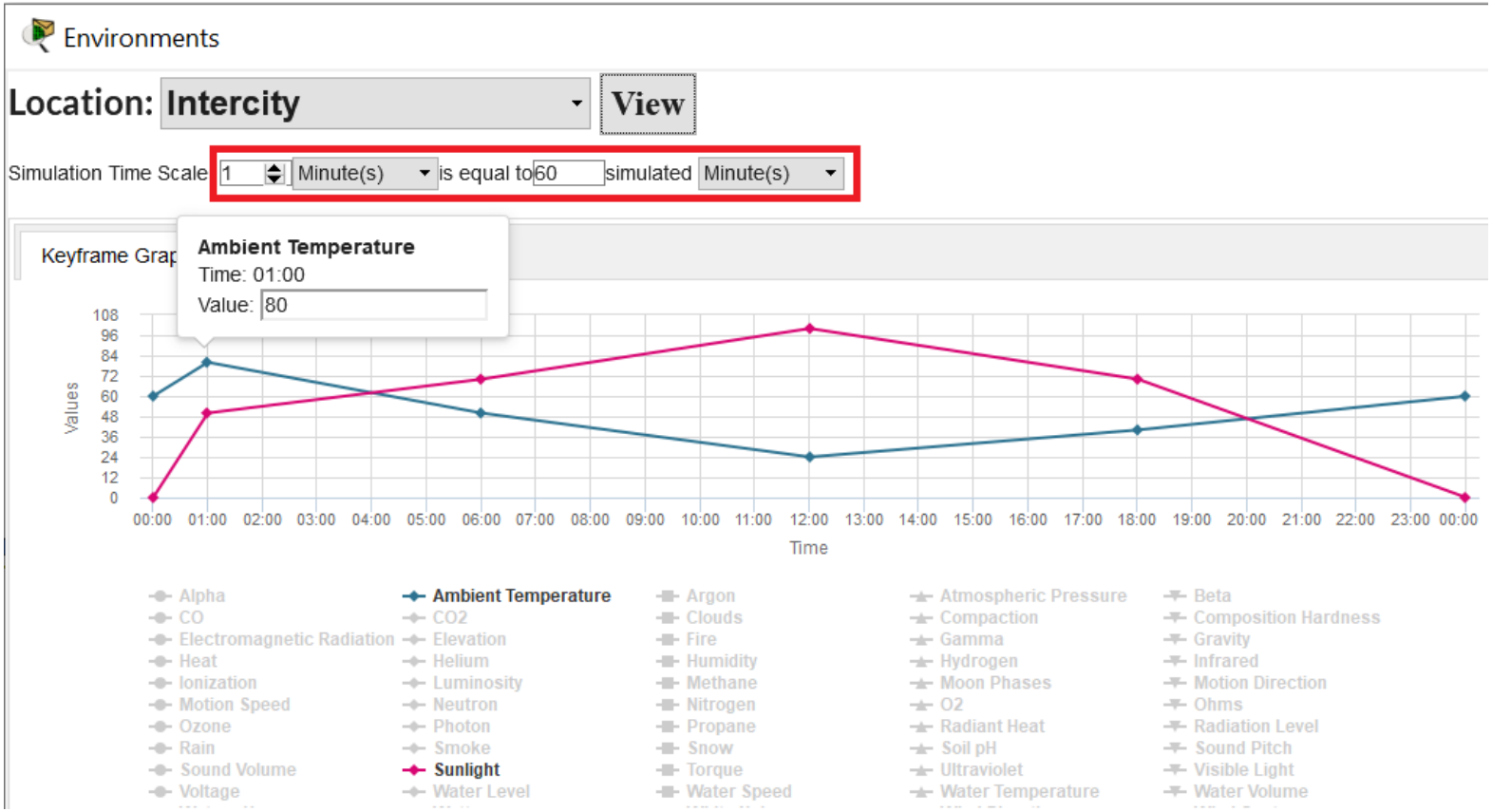

```
 7  def main():
 8      setup()
 9      global state
10      while True:
11          setState()
12          delay(1000)
13
14  def setup():
15      IoEClient.setup({
16          "type": "Microcontroller",
17          "states": [
18              {
19                  "name": "Temperature",
20                  "type": "number",
21                  "unit": "C"
22              }]
23      })
24
25  def setState():
26      temp = digitalRead(0);
27      print(temp);
28      if (temp>660):
29          customWrite(1,1)
30      else:
31          customWrite(1,0)
32      IoEClient.reportStates(temp)
33
34  if __name__ == "__main__":
35      main()
```

SETTING ENVIRONMENT

Setting Environment



Setting Temperature dan simulation time



TUGAS

- Project IoT:
  - Tidak boleh Smart Home
  - Smart Industri, Smart Agriculture, dll
  - Harus mencakup: Sensor, Aktuator, RFID/BLE dan SBC
  - Terintegrasi dgn celluler network
  - Buat IoT Server sendiri dan DNS untuk mengaksesnya
- Buatlah laporan dengan melampirkan:
  - Desain dan penjelasannya di file word
  - Desain di packet tracer
  - Terakhir pengumpulan: 6 November 2020, hari Jumát jam 23.59
- Demo setelah UTS
- Upload di google drive