

HOMEWORK VII
Node JS & Restful API - Week 7 Assignment & Live Session - Node JS & Restful API

**Diajukan untuk Memenuhi salah satu syarat homework
Full Stack Web Developer**



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PEMBAHASAN

Pada Pembahasan ini adalah membuat pemanggilan rumus persegi dan persegi panjang serta pemanggilan log dengan NodeJS

1. Membuat Module Rumus Persegi dan Persegi Panjang

```
// Module Rumus Persegi
exports.hitungKelilingPersegi = function (sisi) {
  return 4 * sisi;
}

exports.hitungLuasPersegi = function (sisi) {
  return sisi * sisi;
}

// Module Rumus Persegi Panjang
exports.hitungKelilingPersegiPanjang = function (panjang, lebar)
{
  return 2 * (panjang + lebar);
}

exports.hitungLuasPersegiPanjang = function (panjang, lebar) {
  return panjang * lebar;
}
```

2. Membuat Soal 1 sebagai pemanggil module

```
let rumus = require('./rumus');

const readline = require('readline');

const buatInputan = readline.createInterface({
  input: process.stdin,
  output: process.stdout
});

// Mengambil input dari user
console.info("Selamat Datang di Rumus Persegi dan Persegi Panjang");
buatInputan.question(`Silahkan masukkan panjang sisi persegi: `,
  (inputSisi) => {
    buatInputan.question(`Silahkan masukkan panjang untuk Persegi Panjang: `, (inputPanjang) => {
```

```
buatInputan.question(`Silahkan masukkan lebar untuk Persegi Panjang: `, (inputLebar) => {
  const sisiPersegi = parseInt(inputSisi);
  const panjangPersegiPanjang = parseFloat(inputPanjang);
  const lebarPersegiPanjang = parseFloat(inputLebar);

  if(!isNaN(sisiPersegi, panjangPersegiPanjang, lebarPersegiPanjang)) {
    const kelilingPersegi = rumus.hitungKelilingPersegi(sisiPersegi);
    const luasPersegi = rumus.hitungLuasPersegi(sisiPersegi);
    const kelilingPersegiPanjang =
      rumus.hitungKelilingPersegiPanjang(panjangPersegiPanjang,
      lebarPersegiPanjang);
    const luasPersegiPanjang =
      rumus.hitungLuasPersegiPanjang(panjangPersegiPanjang,
      lebarPersegiPanjang);

    console.info(`Hasil dari Perhitungan Rumus Persegi dan Persegi Panjang`);
    // Hasil Rumus Persegi
    console.info(`Keliling Persegi: ${kelilingPersegi}`);
    console.info(`Luas Persegi: ${luasPersegi}`);

    // Hasil Rumus Persegi Panjang
    console.info(`Keliling Persegi Panjang:
    ${kelilingPersegiPanjang}`);
    console.info(`Luas Persegi Panjang: ${luasPersegiPanjang}`);
  } else {
    console.info(`Masukkan tidak valid. Harap masukkan input yang benar`);
  }
  buatInputan.close();
});
});
});
```

3. Membuat Log.txt

```
03/22 08:54:24 INFO :.....rsvp_flow_stateMachine: state RESVED, event T1OUT
03/22 08:54:24 TRACE :.....rsvp_action_nHop: constructing a PATH
03/22 08:54:24 TRACE :.....flow_timer_start: started T1
03/22 08:54:24 TRACE :.....rsvp_flow_stateMachine: reentering state RESVED
03/22 08:54:24 TRACE :.....mailslot_send: sending to (9.67.116.99:0)
03/22 08:54:35 TRACE :.....rsvp_event_mapSession: Session=9.67.116.99:1047:6 exists
24
03/22 08:54:35 EVENT :.....api_reader: api request SENDER_WITHDRAW
03/22 08:54:35 INFO :.....rsvp_flow_stateMachine: state RESVED, event PATHTEAR
25
03/22 08:54:35 TRACE :.....traffic_action_oif: is to remove filter
03/22 08:54:35 INFO :.....qosmgr_request: Iocctl to remove reservation successful
03/22 08:54:35 INFO :.....rpapi_Reg_UnregFlow: RSVPRemActionName: Entering

03/22 08:54:35 INFO :.....rpapi_Reg_UnregFlow: ReadBuffer: Entering

03/22 08:54:35 INFO :.....rpapi_Reg_UnregFlow: ReadBuffer: Exiting

03/22 08:54:35 INFO :.....rpapi_Reg_UnregFlow: RSVPRemActionName: Result = 0

03/22 08:54:35 INFO :.....rpapi_Reg_UnregFlow: RSVPRemActionName: Exiting

03/22 08:54:35 INFO :.....rpapi_Reg_UnregFlow: flow[sess=9.67.116.99:1047:6,
source=9.67.116.98:8000] unregistered from CLCat2
03/22 08:54:35 EVENT :.....qosmgr_response: DELRESP from qosmgr, reason=0, qoshandle=0
03/22 08:54:35 INFO :.....qosmgr_response: src=9.67.116.98:8000 dst=9.67.116.99:1047 proto=6
03/22 08:54:35 TRACE :.....traffic_reader: to response msg=3, status=1
26
03/22 08:54:35 TRACE :.....rsvp_action_nHop: constructing a PATHTEAR
03/22 08:54:35 TRACE :.....flow_timer_stop: stopped T1
03/22 08:54:35 TRACE :.....flow_timer_stop: Stop T4
27
03/22 08:54:35 TRACE :.....rsvp_flow_stateMachine: entering state SESSIONED
03/22 08:54:35 TRACE :.....mailslot_send: sending to (9.67.116.99:0)
03/22 08:54:35 TRACE :.....rsvp_event_propagate: flow[session=9.67.116.99:1047:6,
source=9.67.116.98:8000] ceased
28
03/22 08:54:35 EVENT :.....api_reader: api request CLOSE
03/22 08:54:35 INFO :.....rsvp_flow_stateMachine: state SESSIONED, event PATHTEAR
03/22 08:54:35 PROTERR:.....rsvp_flow_stateMachine: state SESSIONED does not expect event PATHTEAR
29
03/22 08:54:53 EVENT :..mailslot_sitter: process received signal SIGTERM
03/22 08:54:53 INFO :...check_signals: received TERM signal
03/22 08:54:53 INFO :.....term_policyAPI: UnRegisterFromPolicyAPI: Entering

03/22 08:54:53 INFO :.....term_policyAPI: ReadBuffer: Entering

03/22 08:54:53 INFO :.....term_policyAPI: ReadBuffer: Exiting

03/22 08:54:53 INFO :.....term_policyAPI: UnRegisterFromPolicyAPI: Result = 0

03/22 08:54:53 INFO :.....term_policyAPI: UnRegisterFromPolicyAPI: Exiting

03/22 08:54:53 INFO :.....term_policyAPI: APITerminate: Entering

03/22 08:54:53 INFO :.....term_policyAPI: APITerminate: Exiting

03/22 08:54:53 INFO :.....term_policyAPI: Policy API terminated
03/22 08:54:53 INFO :.....dreg_process: deregistering process with the system
03/22 08:54:53 INFO :.....dreg_process: attempt to dereg (ifaaddrg_byaddr)
03/22 08:54:53 INFO :.....dreg_process: rc from ifaaddrg_byaddr rc =0
03/22 08:54:53 INFO :.....terminator: process terminated with exit code 0
```

4. Membuat Soal 2 sebagai pemanggil log.txt

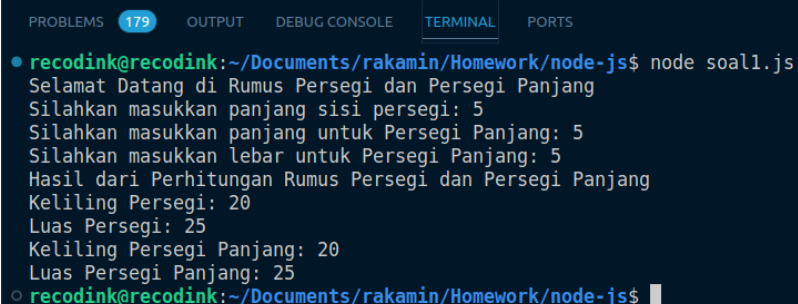
```
// Membuat Variable fs untuk mengambil module fs
const fs = require("fs");

// variable sebagai penampung mengambil data dari homework-log
const dataLog = "homework-log.txt";
```

```
// Membuat fungsi readFile untuk membaca isi dataLog
fs.readFile(dataLog, "utf-8", (err, data) => {
// Membuat Statement If Else untuk mendeteksi error atau tidak
if (err){
console.error(`Terjadi Kesalahan saat menulis file: `, err.message);
} else {
console.info(data);
console.info("Berhasil Membaca Data Logging");
// variabel sebagai penampung baru dataLog yang akan dieksekusi ke file
log
const newDataLog = data + dataLog;
// Membuat fungsi writeFile untuk menulis data dari newDataLog ke file
log
fs.writeFile("log.txt", newDataLog, "utf-8", (err) => {
if (err) {
console.error(`Terjadi Kesalahan saat menulis file: `, err.message);
} else {
console.info("Data berhasil ditulis ke file log.txt");
}
});
}
});
```

5. Aksi Pada Soal 1

1. Jika Inputan Benar



```
PROBLEMS 179 OUTPUT DEBUG CONSOLE TERMINAL PORTS
• recodink@recodink:~/Documents/rakamin/Homework/node-js$ node soal1.js
Selamat Datang di Rumus Persegi dan Persegi Panjang
Silahkan masukkan panjang sisi persegi: 5
Silahkan masukkan panjang untuk Persegi Panjang: 5
Silahkan masukkan lebar untuk Persegi Panjang: 5
Hasil dari Perhitungan Rumus Persegi dan Persegi Panjang
Keliling Persegi: 20
Luas Persegi: 25
Keliling Persegi Panjang: 20
Luas Persegi Panjang: 25
○ recodink@recodink:~/Documents/rakamin/Homework/node-js$
```

2. Jika Inputan Salah

```
PROBLEMS 179 OUTPUT DEBUG CONSOLE TERMINAL PORTS
• recodink@recodink:~/Documents/rakamin/Homework/node-js$ node soal1.js
Selamat Datang di Rumus Persegi dan Persegi Panjang
Silahkan masukkan panjang sisi persegi: lima
Silahkan masukkan panjang untuk Persegi Panjang: 5
Silahkan masukkan lebar untuk Persegi Panjang: 5
Masukkan tidak valid. Harap masukkan input yang benar
○ recodink@recodink:~/Documents/rakamin/Homework/node-js$
```

6. Aksi Pada Soal 2

1. Jika Benar

```
PROBLEMS 110 OUTPUT DEBUG CONSOLE TERMINAL PORTS
source=9.67.116.98:8000] ceased
28
03/22 08:54:35 EVENT :.....api_reader: api request CLOSE
03/22 08:54:35 INFO :.....rsvp_flow_stateMachine: state SESSIONED, event PATHTEAR
03/22 08:54:35 PROTERR:.....rsvp_flow_stateMachine: state SESSIONED does not expect event PATHTEAR
29
03/22 08:54:53 EVENT :..mailslot_sitter: process received signal SIGTERM
03/22 08:54:53 INFO :...check signals: received TERM signal
03/22 08:54:53 INFO :.....term_policyAPI: UnRegisterFromPolicyAPI: Entering

03/22 08:54:53 INFO :.....term_policyAPI: ReadBuffer: Entering
03/22 08:54:53 INFO :.....term_policyAPI: ReadBuffer: Exiting
03/22 08:54:53 INFO :.....term_policyAPI: UnRegisterFromPolicyAPI: Result = 0
03/22 08:54:53 INFO :.....term_policyAPI: UnRegisterFromPolicyAPI: Exiting
03/22 08:54:53 INFO :.....term_policyAPI: APITerminate: Entering
03/22 08:54:53 INFO :.....term_policyAPI: APITerminate: Exiting

03/22 08:54:53 INFO :.....term_policyAPI: Policy API terminated
03/22 08:54:53 INFO :.....dreg_process: deregistering process with the system
03/22 08:54:53 INFO :.....dreg_process: attempt to dereg (ifaeddrq_byaddr)
03/22 08:54:53 INFO :.....dreg_process: rc from ifaeddrq_byaddr rc =0
03/22 08:54:53 INFO :.....terminator: process terminated with exit code 0
Berhasil Membaca Data Logging
Data berhasil ditulis ke log.txt
○ recodink@recodink:~/Documents/rakamin/Homework/node-js$
```

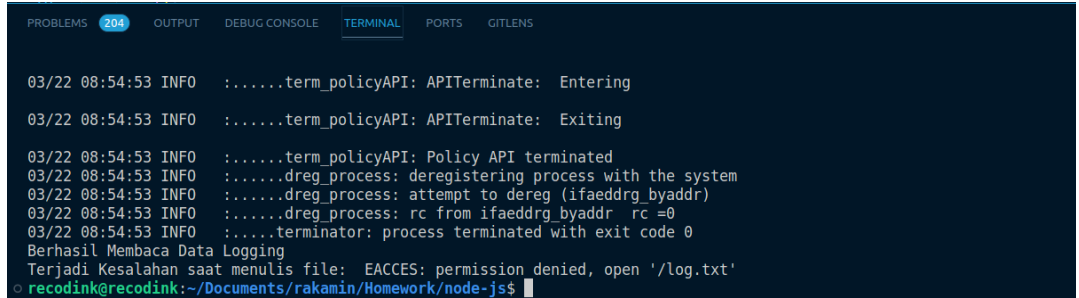
Before

```
JS soal2.js homework-log.txt log.txt X JS soal1.js
log.txt
1
```

After

```
JS soal2.js homework-log.txt log.txt X JS soal1.js
log.txt
1 03/22 08:54:24 INFO :.....rsvp_flow_stateMachine: state RESVED, event T1OUT
2 03/22 08:54:24 TRACE :.....rsvp_action_nhop: constructing a PATH
3 03/22 08:54:24 TRACE :.....flow_timer_start: started T1
4 03/22 08:54:24 TRACE :.....rsvp_flow_stateMachine: reentering state RESVED
5 03/22 08:54:24 TRACE :.....mailslot send: sending to (9.67.116.99:0)
6 03/22 08:54:35 TRACE :.....rsvp_event_mapSession: Session=9.67.116.99:1047:6 exists
7 24
8 03/22 08:54:35 EVENT :.....api_reader: api request SENDER WITHDRAW
9 03/22 08:54:35 INFO :.....rsvp_flow_stateMachine: state RESVED, event PATHTEAR
10 25
11 03/22 08:54:35 TRACE :.....traffic action oif: is to remove filter
12 03/22 08:54:35 INFO :.....gsmgr request: Ioctl to remove reservation successful
13 03/22 08:54:35 INFO :.....rpapi_Reg_UnregFlow: RSVPRemActionName: Entering
14
15 03/22 08:54:35 INFO :.....rpapi_Reg_UnregFlow: ReadBuffer: Entering
16
17 03/22 08:54:35 INFO :.....rpapi_Reg_UnregFlow: ReadBuffer: Exiting
18
19 03/22 08:54:35 INFO :.....rpapi_Reg_UnregFlow: RSVPRemActionName: Result = 0
```

2. Jika Salah pada penulisan (lokasi)



```
PROBLEMS 204 OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS

03/22 08:54:53 INFO :.....term_policyAPI: APITerminate: Entering
03/22 08:54:53 INFO :.....term_policyAPI: APITerminate: Exiting
03/22 08:54:53 INFO :.....term_policyAPI: Policy API terminated
03/22 08:54:53 INFO :.....dreg_process: deregistering process with the system
03/22 08:54:53 INFO :.....dreg_process: attempt to dereg (ifaaddrg_byaddr)
03/22 08:54:53 INFO :.....dreg_process: rc from ifaaddrg_byaddr rc =0
03/22 08:54:53 INFO :.....terminator: process terminated with exit code 0
Berhasil Membaca Data Logging
Terjadi Kesalahan saat menulis file: EACCES: permission denied, open '/log.txt'
recodink@recodink:~/Documents/rakamin/Homework/node-js$
```

7. Link Github

<https://github.com/ReCodink/HomeworkVII.git>