                    Http Status Code
                    (Http Response)

=> After Processing Request by Provider,
   we should send details of processing to consumer
   by using Http Response Status Code(5 types).

   Code   Message

   1xx   Information
   2xx   Success
   3xx   Redirect
   4xx   Client Side Error
   5xx   Server Side Error

Ref Link#
https://developer.mozilla.org/en-US/docs/Web/HTTP/Status
==
a. If request is processed successfuly (no exception/no error)
   then Return Http Status 200-OK

b. For current request something new data(Resource) is created
   at server side - then Return Http Status 201-CREATED
     (ex: Database Table#Row[inserted], one PDF is crated..etc)

c. For Void type response recomanded Status code is 204-No Content

d. Accepted Header Param is considered and expected data format is
   given back then return Http Status code - 202 Accepted

#) Model class
package in.nareshit.raghu.model;

```java
@Data
@NoArgsConstructor
@AllArgsConstructor
public class Employee {

        private Integer eid;
        private String ename;
        private Double esal;
        private Double hra;
        private Double ta;
}
```

#)RestController
package in.nareshit.raghu.rest;

```java
@RestController
@RequestMapping("/employee")
public class EmployeeRestController {
```

```java
        @GetMapping("/backup")
        public ResponseEntity<Void> exportDataAsBack() {
                //logic
                System.out.println("EXECUTING BACKUP PROCESS");
                return new ResponseEntity<Void>
(HttpStatus.NO_CONTENT);
        }

        @PostMapping("/save")
        public ResponseEntity<String> createEmployee() {
                //logic
                return new ResponseEntity<String>(
                                "Employee created!",
HttpStatus.CREATED);
        }


        @PostMapping("/read")
        public ResponseEntity<Employee> readEmp(
                        @RequestBody Employee employee
                        )
        {
                var sal = employee.getEsal();
                var hra = sal * 10/100.0;
                var ta = sal * 6/100.0;

                employee.setHra(hra);
                employee.setTa(ta);

                return new ResponseEntity<Employee>(
                                employee,
                                HttpStatus.ACCEPTED);

        }
}
```

Client Side Error

*) 400 - BAD REQUEST
   Input DataType mismatch or required params missing
    then Http Status code is 400 -BAD Request
Ex: int sid=___   URL?sid=ABC

*) 404 - Not Found
   If Entered URL , doesnt match with any RestController method
   then FC return 404-Not Found

*) 405 - Method Not Allowed
    If Code is GET type but request is POST type then
    FC return 405 - Method Not Allowed

*) 406 - Not Acceptable
    If we request using Accept=_____ Header, Content-Type
    is not supported then FC returns 406 - Not Acceptable

*) 415 - Unsupported Media Type

```
     If Request Body MediaType (Content-Type=_____) is not supported
        then FC return 415 - Unsupported Media Type

*) 401 - Unauthorized (Security)
   Try to access URL without Login.

*) 403- FORBIDDEN (Security) [invalid role access]
   Logged in as Clerk, but trying to access Manager Services.

-------------------------------------------------------------
*) 500 - INERNAL SERVER ERROR

RestController#method

        @GetMapping("/data")
        public ResponseEntity<String> processData() {
                if(new Random().nextInt(100)<=100)
                {
                        throw new RuntimeException("DUMMY");
                }
                return null;
        }
-------------------------------------------------------------
Information BankApp-->HTTP /SMTP
Redirect    S#1-->S#2-->S#3
            BMS-->PayTM-->BankApp

=============================================================
```