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Spring Boot 9AM

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Spring Boot - Email Application

- *) I(person) want to send email using Web Browser,
- a) Open Browser and Type gmail.com (or mail.google.com)
[Going to Mail Website]
- b) Login with username and password
- c) Click on Comppompose button (empty/new Message is created)
- d) Fill Data (To, Cc,Bcc,....)
- e) Click on Send Button.

*) Now, we want to do same thing using Programming

- a) Goto Mail Server and Login
- b) Compose New Message + Fill Data + Send

*) Spring Boot has provided Java Mail API, to send email.
in pom.xml

```
<dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-mail</artifactId>
</dependency>
```

*) Spring Boot has provided one interface 'JavaMailSender'(I)
and impl class JavaMailSenderImpl(C)

=> JavaMailSenderImpl(C) is a pre-defined class given by Mail API.
This class, if we configure using @Configuration and @Bean,
will Goto MailServer and Login using username and password

---Spring Based Code--

@Configuration

```
public class AppConfig {
    //1 object = 1 method
    @Bean
    public JavaMailSenderImpl sender() {
        JavaMailSenderImpl jm = new JavaMailSenderImpl();
        jm.setHost("smtp.gmail.com");
        jm.setPort(587);
        jm.setUsername("javaraghu2018@gmail.com");
        jm.setPassword("0044javaraghu2200");
        //....
        return jm;
    }
}
```

Email AutoConfiguration

Spring Boot has provided above configuration as in-built (no need to write above code), when we add 'spring-boot-starter-mail' dependency(JAR).

But, we need to pass host,port,username,password, mail properties..using application.properties (___.yml).

```
----MailSenderPropertiesConfiguration(C)-- [ctrl+shift+T]-----
@Configuration
@ConditionalOnProperty(prefix = "spring.mail", name = "host")
class MailSenderPropertiesConfiguration {

    @Bean
    JavaMailSenderImpl mailSender(MailProperties properties) {
        JavaMailSenderImpl sender = new JavaMailSenderImpl();
        sender.setHost(properties.getHost());
        sender.setPort(properties.getPort());

        sender.setUsername(properties.getUsername());
        sender.setPassword(properties.getPassword());
        sender.setProtocol(properties.getProtocol());
        .....
        return sender;
    }

}

@ConfigurationProperties(prefix = "spring.mail")
public class MailProperties {

    private String host;
    private Integer port;
    private String username;
    private String password;

    ....
}
```

*) Above Autotconfiguration says pass the input using common prefix spring.mail using Properties file

```
--application.properties-----
spring.mail.host=smtp.gmail.com
spring.mail.port=587
spring.mail.username=javaraghu2018@gmail.com
spring.mail.password=0044javaraghu2200
#Transport Layer Security
spring.mail.properties.mail.smtp.starttls.enable=true
-----

---application.yml---
```

```
spring:
  mail:
    host: smtp.gmail.com
    username: javaraghu2018@gmail.com
    password: 0044javaraghu2200
    port: 587
    properties:
      mail:
        smtp:
          starttls:
            enable: true
```

Google Search : google smtp server details

Q) What is AutoConfiguration in Spring Boot?

A) Reduces Programmer setup coding compared to Spring F/w.
By providing dynamic input using @ConfigurationProperties

ie in Spring f/w programmer is writing @Configuration + @Bean
related code. In Spring Boot such code is automated.

Q) How can we find Auto-Configuration code for every starter/concept?

A) You can open Jar : spring-boot-autoconfigurer (under Maven
Dependencies/classpath)

that contains packages :
org.springframework.boot.autoconfigure._____

Ex:

```
org.springframework.boot.autoconfigure.mail
org.springframework.boot.autoconfigure.web
org.springframework.boot.autoconfigure.security
org.springframework.boot.autoconfigure.jdbc
org.springframework.boot.autoconfigure.data.jpa
..etc
```

Task: Answer max 4 lines

Q) What is SSL and TLS?

Q) What are OSI Network Layers?

Q) What are Datapackets and Frames?

Q) What is TCP/IP Communication?

Q) What are HTTP and SMTP Protocols?

