1. **Given the following class diagram, follow the instructions below.**

Class Diagram

```
                    AirConditioner
┌──────────────────────────────────────────────────┐
│ -MIN_TEMPERATURE: int = 20                         │
│ -MAX_TEMPERATURE: int = 30                         │
│ -MAX_FAN_SPEED: int = 2                             │
│ -MIN_FAN_SPEED: int = 0                             │
│ -airOn: boolean                                    │
│ -fanOn: boolean                                    │
│ -targetTemperature: int                            │
│ -fanSpeed: int                                     │
├──────────────────────────────────────────────────┤
│ +AirConditioner(int targetTemperature, int fanSpeed)│
│ +isAirOn(): boolean                                │
│ +getTargetTemperature(): int                       │
│ +turnAirOnOff(): void                              │
│ +increaseTemperature(): void                       │
│ +decreaseTemperature(): void                       │
│ +changeFanSpeed(): void                            │
└──────────────────────────────────────────────────┘
```
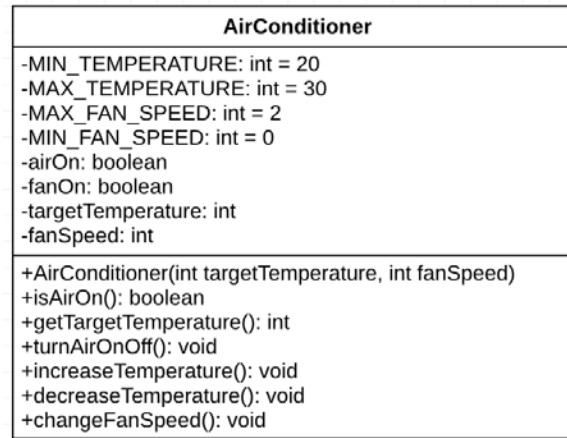
Write a java class according to the above class diagram and the following requirements.

- Create a constructor with two parameters: `target temperature` and `fan speed`. This constructor will assign values to the attributes: `target temperature` and `fan speed`.
- The `target temperature` will range between 20 and 30 Celsius(C°). The `fan speed` can be 0 ("low"), 1 ("medium") or 2 ("high"). If the user enters the value greater than the maximum value, set the value to the maximum value. If the user enters the value lower than the minimum value, set the value to the minimum value.
- The `isAirOn()` method will return boolean value. It returns `true` when the air condition is on. Otherwise, it returns `false`.
- The `getTagetTemperature()` method will return the target temperature of air conditioner in Celsius(C°).
- The `turnAirOnOff()` method will set both `airOn` and `fanOn` attributes to `true` when the air conditioner is off. When the air conditioner is on, it will set both `airOn` and `fanOn` attributes to `false`.
- The `increaseTemperature()` will increase the target temperature by one. If the target temperature is greater than the maximum temperature, the target temperature is set to the maximum temperature.
- The `decreaseTemperature()` will decrease the target temperature by one. If the target temperature is lower than the minimum temperature, the target temperature is set to the minimum temperature.
- The `changeFanSpeed()` will increase the fan speed by one. If the fan speed is greater than the maximum fan speed, the fan speed is set to the minimum fan speed.
- The `toString()` method return a string about air conditioner information as follows:
  - When air condition is off:
    `Air Conditioner {Status: off}`

  - When air condition is on:
    `Air Conditioner {Status: on, Temp: 25, Fan: low}`