

Database and Information Systems 2020/2021, Test 1 (SQL SELECT), Variant: B

Duration: 70min

Maximal number of points/minimal number of points: 15/8

Only complete and correct solution will be evaluated by non-zero points.

Tasks

1. Add attribute `reliability` to the table `device`. The attribute will be of type `char(1)` and will be able to take only the values '0' or '1'. The attribute will be mandatory with a default value '1'.

Create a procedure `SetReliability` that calculates for each device how many 'failure of machine part' or 'full machine failure' events have occurred. If there are more than 5 such events for a device, the reliability of the device will be set to '0'. The procedure will be handled as a transaction.

2. Create function `DeviceMovement` with parameters `deviceId`, `targetBuilding` that will move the device defined by parameter `deviceId` to `targetBuilding` and it will return the text 'OK' in case of a successful movement. Before movement, the function will check:
 - (a) if the device with the given `deviceId` exists, if not, the function will return the text 'NO_DEVICE'.
 - (b) if the device is already located in the target building, if so, the function will return the text 'ALREADY_MOVED'
 - (c) if the target building has already full capacity (it contains 3 or more devices), if so, the function will return the text 'FULL_CAPACITY'.