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1  // SPDX-License-Identifier: MIT
2  // OpenZeppelin Contracts v4.4.1 (access/IAccessControl.sol)
3
4  pragma solidity ^0.8.0;
5
6  /**
7   * @dev External interface of AccessControl declared to support ERC165 detection.
8   */
9  interface IAccessControl {
10     /**
11      * @dev Emitted when `newAdminRole` is set as ``role``'s admin role, replacing
12      * `previousAdminRole`
13      *
14      * `DEFAULT_ADMIN_ROLE` is the starting admin for all roles, despite
15      * {RoleAdminChanged} not being emitted signaling this.
16      *
17      * _Available since v3.1._
18     */
19     event RoleAdminChanged(bytes32 indexed role, bytes32 indexed previousAdminRole,
20     bytes32 indexed newAdminRole);
21
22     /**
23      * @dev Emitted when `account` is granted `role`.
24      *
25      * `sender` is the account that originated the contract call, an admin role
26      * bearer except when using {AccessControl-setupRole}.
27     */
28     event RoleGranted(bytes32 indexed role, address indexed account, address indexed
29     sender);
30
31     /**
32      * @dev Emitted when `account` is revoked `role`.
33      *
34      * `sender` is the account that originated the contract call:
35      * - if using `revokeRole`, it is the admin role bearer
36      * - if using `renounceRole`, it is the role bearer (i.e. `account`)
37     */
38     event RoleRevoked(bytes32 indexed role, address indexed account, address indexed
39     sender);
40
41     /**
42      * @dev Returns `true` if `account` has been granted `role`.
43     */
44     function hasRole(bytes32 role, address account) external view returns (bool);
45
46     /**
47      * @dev Returns the admin role that controls `role`. See {grantRole} and
48      * {revokeRole}.
49      *
50      * To change a role's admin, use {AccessControl-_setRoleAdmin}.
51     */
52     function getRoleAdmin(bytes32 role) external view returns (bytes32);
53
54     /**
55      * @dev Grants `role` to `account`.
56      *
57      * If `account` had not been already granted `role`, emits a {RoleGranted}
58      * event.
59      *
60      * Requirements:
61      * - the caller must have ``role``'s admin role.
62     */
63     function grantRole(bytes32 role, address account) external;
64
65     /**
66      * @dev Revokes `role` from `account`.
67      *
68      * If `account` had been granted `role`, emits a {RoleRevoked} event.
69      *
70      * Requirements:
71      * - the caller must have ``role``'s admin role.

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```
70     */
71     function revokeRole(bytes32 role, address account) external;
72
73     /**
74     * @dev Revokes `role` from the calling account.
75     *
76     * Roles are often managed via {grantRole} and {revokeRole}: this function's
77     * purpose is to provide a mechanism for accounts to lose their privileges
78     * if they are compromised (such as when a trusted device is misplaced).
79     *
80     * If the calling account had been granted `role`, emits a {RoleRevoked}
81     * event.
82     *
83     * Requirements:
84     *
85     * - the caller must be `account`.
86     */
87     function renounceRole(bytes32 role, address account) external;
88 }
89
```