What is claimed is:

1. An IC card comprising:

a communicator which performs communication with a terminal device;

a storage which stores authentication information for authenticating a user; and

an authentication processor which performs personal authentication on the basis of input information received from the terminal device through the communicator and authentication information stored in the storage,

wherein the authentication processor extends an authentication processing time until completion of authentication becomes possible again on the basis of the number of times of the personal authentication having failed,

wherein the authentication processor waits for execution of processing after the input information has been received through the communicator until a waiting time corresponding to the extended authentication processing time elapses.

2. The IC card according to claim 1, wherein the authentication processor extends the authentication processing time on the basis of the waiting time correlated with the number of times of successive authentication failures.

3. The IC card according to claim 2, wherein the authentication processor increases a waiting time as the number of times of successive authentication failures increases.

4. The IC card according to claim 2, wherein the authentication processor changes the waiting time correlated with the number of times of successive authentication failures on the basis of at least one of an authentication method, the strength of an encryption key and the strength of authentication information.

5. The IC card according to claim 2, further comprising a waiting time controller which changes the waiting time correlated with the number of times of successive authentication failures on the basis of a waiting time change request acquired through the communicator.

6. The IC card according to claim 1, wherein the authentication processor waits until the waiting time elapses before causing the communicator to transmit a result of personal authentication based on the input information and the authentication information to the terminal device.

7. An IC card comprising:

a communicator which performs communication with a terminal device;

a storage which stores authentication information for authenticating a user; and

an authentication processor which performs personal authentication on the basis of input information received from the terminal device through the communicator and authentication information stored in the storage,

wherein the authentication processor extends an authentication processing time until completion of authentication becomes possible again on the basis of the number of times of the personal authentication having failed,

wherein when the authentication processor is in a waiting state when the input information has been received through the communicator, the authentication processor transmits information representing being in the waiting state to the terminal device and ends the processing for the input information and receives the next input information.

8. The IC card according to claim 1, wherein the authentication processor increases an authentication prohibition time period based on failure of authentication of this time following to the previous failure of authentication if the authentication processor failed to perform personal authentication,

wherein in the authentication prohibition time period, the authentication processor is prohibited to perform personal authentication,

wherein the authentication prohibition time period starts at a time that the authentication processor failed to perform personal authentication.

9. The IC card according to claim 8, wherein the authentication processor sets the authentication prohibition time period if the authentication processor failed to perform personal authentication in the absence of the authentication prohibition time period which is set.

10. The IC card according to claim 8, wherein the authentication processor sets a first authentication prohibition time period if the authentication processor failed to perform personal authentication in the absence of the first authentication prohibition time period which is set,

wherein the authentication processor replaces the first authentication prohibition time period by a second authentication prohibition time period if the authentication processor failed to perform personal authentication in the presence of the first authentication prohibition time period which is set,

wherein the second authentication prohibition time period is longer than the first authentication prohibition time period.

11. A method of controlling an IC card including a communicator which performs communication with a terminal device, a storage which stores authentication information for authenticating a user, and an authentication processor which performs personal authentication, the method comprising:

performing the personal authentication on the basis of input information received from the terminal device through the communicator and authentication information stored in the storage;

extending an authentication processing time until completion of authentication becomes possible again on the basis of the number of times of the personal authentication having failed; and

waiting for execution of processing after the input information has been received through the communicator until a waiting time corresponding to the extended authentication processing time elapses.

12. An IC card comprising:

a communicator which performs communication with a terminal device;

a storage which stores authentication information for authenticating a user; and

an authentication processor which performs personal authentication on the basis of input information received from the terminal device through the communicator and authentication information stored in the storage,

wherein the authentication processor extends an authentication processing time until completion of authentication becomes possible again on the basis of the number of times of the personal authentication having failed,

wherein when the authentication processor is in a waiting state when the input information has been received through the communicator, the authentication processor transmits an information representing being in the waiting state to the terminal device,

wherein the information representing being in a waiting state includes information regarding a waiting time corresponding to the extended authentication processing time.

13. An IC card comprising:

a communicator which performs communication with a terminal device;

a storage which stores authentication information for authenticating a user;

an authentication processor which performs personal authentication on the basis of input information received from the terminal device through the communicator and authentication information stored in the storage; and

wherein the authentication processor extends an authentication processing time until completion of authentication becomes possible again on the basis of the number of times of the personal authentication having failed,

further comprising a waiting time controller which performs control of resetting a waiting time corresponding to the extended authentication processing time when a release command has been received from the terminal device.