**Calendar Application Server-to-Client Protocol**

Client-Server Data Flow

* Add a user

**Control Byte:** 0000 0001 (1)

**Format**: Each user name is one single word (only alpha numeric, hyphen, only dash). Each user password should be longer than 8 and shorter than 16 alpha-numeric character)

**Flow:** CB -- Username -- Password

**Server Response (byte):** 0000 0001 (1) – OK

0000 0010 (2) – Server Error

0000 0011 (3) – Username already used

0000 0100 (4) – Malformed Data

* Delete a user

**Control Byte:** 0000 0010 (2)

**Format**: Username must exist, sent password and stored password must match

**Flow:** CB -- Username -- Password

**Server Response (byte):** 0000 0001 (1) – OK

0000 0010 (2) – Server Error

0000 0011 (3) – Username/Password don’t exist

* Modify user information: Name, password, contact phone number, and email address

**Control Byte:** 0000 0011 (3)

**Format**: Each user name is one single word (only alpha numeric, hyphen, only dash). Each user password should be longer than 8 and shorter than 16 alpha-numeric character)

**SEC Control Byte**: 0000 0001 (1) – Name

0000 0010 (2) – Password

0000 0011 (3) – Phone Number

0000 0100 (4) – Email Address

**Flow:** CB -- SCB -- [username | password | number | email]

**Server Response (byte):** 0000 0001 (1) – OK

0000 0010 (2) – Server Error

0000 0011 (3) – Malformed Data

**TODO:** Have the user input their password before they can change data

* User login authentication with user name and password

**Control Byte:** 0000 0100 (4)

**Format**: Each user name is one single word (only alpha numeric, hyphen, only dash). Each user password should be longer than 8 and shorter than 16 alpha-numeric character)

**Flow:** CB -- Username -- Password

**Server Response (byte):** 0000 0001 (1) – OK

0000 0010 (2) – Server Error

0000 0011 (3) – Username/password don’t exist

* Add a new appointment

**Control Byte:** 0000 0101 (5)

**Format**: Appointment begin – HH:MM MM/DD/YEAR (24-hour format)

Appointment end – HH:MM MM/DD/YEAR (24-hour format)

Appointment place (or room) – Ascii text up to 64 characters

Appointment contents – Ascii text up to 128 characters

**Flow:** CB -- Begin -- End -- Place -- Content

**Server Response (byte):** 0000 0001 (1) – OK

0000 0010 (2) – Server Error

0000 0011 (3) – Malformed Data

* Remove an appointment

**Control Byte:** 0000 0110 (6)

**Format**:

**Flow:** CB -- Appointment ID

**Server Response (byte):** 0000 0001 (1) – OK

0000 0010 (2) – Server Error

0000 0011 (3) – Malformed Data

* Update an existing appointment

**Control Byte:** 0000 0111 (7)

**Format**:

**SEC Control Byte**: 0000 0001 (1) – Appointment Begin

0000 0010 (2) – Appointment End

0000 0011 (3) – Appointment Place

0000 0100 (4) – Appointment Contents

**Flow:** CB -- SCB -- Appointment ID -- [ Appointment Begin | Appointment End | Place | Contents ]

**Server Response (byte):** 0000 0001 (1) – OK

0000 0010 (2) – Server Error

0000 0011 (3) – Malformed Data