C Project : Team 7 – Phase 1

**Problem Statement:** Develop a datafile of billing information

**Data Structures:**

#define MAX\_CUST 50

#define MAX\_MONTH 12

#define MIN\_YEAR 1600

#define MAX\_YEAR 2999

#define MIN\_BILLS\_PER\_DAY 20

#define MAX\_BILLS\_PER\_DAY 40

#define MIN\_BILL\_AMT 100

#define MAX\_BILL\_AMT 5000

struct date{

    int dd;

    int mm;

    int yy;

};

struct person{

    char name[MAX\_CUST];

};

struct details{

    char name[MAX\_CUST];

    double amt;

};

struct bill{

    struct details d[MAX\_BILLS\_PER\_DAY];

    int limit;

    struct date dt;

};

**Functions:**

* void read\_cust\_data(FILE\* fp, struct person\* p);

// Function to reach file from file and store in array of structures

* int is\_valid\_dates(const struct date\* start\_date, const struct date\* end\_date);

// Validate the date (check format and compare if end date greater than start date

* static int date\_diff(const struct date\* start\_date,const  struct date\* end\_date); //Function to find number of days between two dates.
* void generate\_bill(struct bill\* b, const struct date\* start\_date, int days, struct person\* p);

// Function to generate bill by validating data

* static int get\_random\_val(int min, int max)

// Function to generate random value with range(min, max).

* static void generate\_array\_of\_unique\_indices(int\* arr, int max)

// Function to select unique index randomly.

* void disp\_data\_by\_day(struct bill\* b, int days, struct person\* p);

// Display data based on day

* void disp\_data\_by\_name(struct bill\* b, int days, struct person\* p);

// Display data based on person