**C EXAMPLES**

**Basic calculator**

Int num1, num2;

Printf(“Enter first number: “);

Scanf(“%d”, &num1);

Printf(“Enter second number: “);

Scanf(“%d”, &num2);

Printf(“Answer: %d”, num1 + num2);

**Basic game**

Char color[20];

Char word[20];

Char celebrity[20];

Printf(“Enter a color: “);

Scanf(“%s”, &color);

// do the same for ‘word’ and ‘celebrity’

Printf(“Roses are %s\n%s are blue\nI love %s”, color, word, celebrity);

**Better calculator**

Double num1, num2;

Char op;

Printf(“Enter a number: “);

Scanf(“%d”, &num1);

// do same for num2

Printf(“pick an operator: ”);

Scanf(“ %c”, &op);

If (op == ‘+’) {

Printf(“Answer: %lf”, num1 + num2);

} // else if ‘-‘, ‘\*’, ‘/’

**Guessing game**

Int secretNum = 5; // can be anything

Int guess;

While (guess != secretNum) {

Printf(“Pick a number: ”);

Scanf(“%d”, &guess);

}

Printf(“You win!”);

**Calendar**

// work out what day each year starts on

int getFirstWeekDay(int year) {

int day;

day = (((year - 1) \* 365) + ((year - 1) / 4) - ((year - 1) / 100) + ((year) / 400) + 1) %7;

return day;

}

int main() {

system("Color 3F"); // terminal background color

int year, month, day, daysInMonth, weekDay=0, startingDay;

printf("\nEnter your desired year: ");

scanf("%d", &year);

char \*months[12] = {"January", "February", "March", "April", "May", "June", "July", "August", "September", "October", "November", "December"};

int monthDay[12] = {31, 28, 31, 30, 31, 30, 31, 31, 30, 31, 30, 31};

// work out if leap year

if ((year%4 == 0 && year%100 != 0) || year %400==0) {

monthDay[1] = 29;

}

startingDay = getFirstWeekDay(year);

for (month = 0; month<12; month++) {

daysInMonth = monthDay[month];

printf("\n\n------------%s------------", months[month]);

printf("\n Sun Mon Tue Wed Thu Fri Sat\n");

for (weekDay = 0; weekDay<startingDay; weekDay++) {

printf(" ");

}

for (day = 1; day <= daysInMonth; day++) {

printf("%5d", day);

if (++weekDay > 6) {

printf("\n");

weekDay = 0;

}

startingDay = weekDay;

}

}

return 0;

}