

```

/* external variables */
int num_in_rank[NUM_RANKS];
int num_in_suit[NUM_SUITS];
bool straight, flush, four, three;
int pairs; /* can be 0, 1, or 2 */

/* prototypes */
void read_cards(void);
void analyze_hand(void);
void print_result(void);

/*****
 * main: Calls read_cards, analyze_hand, and print_result *
 * repeatedly. *
 *****/
int main(void)
{
    for (;;) {
        read_cards();
        analyze_hand();
        print_result();
    }
}

/*****
 * read_cards: Reads the cards into the external *
 * variables num_in_rank and num_in_suit; *
 * checks for bad cards and duplicate cards. *
 *****/
void read_cards(void)
{
    bool card_exists[NUM_RANKS][NUM_SUITS];
    char ch, rank_ch, suit_ch;
    int rank, suit;
    bool bad_card;
    int cards_read = 0;

    for (rank = 0; rank < NUM_RANKS; rank++) {
        num_in_rank[rank] = 0;
        for (suit = 0; suit < NUM_SUITS; suit++)
            card_exists[rank][suit] = false;
    }

    for (suit = 0; suit < NUM_SUITS; suit++)
        num_in_suit[suit] = 0;

    while (cards_read < NUM_CARDS) {
        bad_card = false;

        printf("Enter a card: ");

        rank_ch = getchar();
        switch (rank_ch) {

```