

```

In [ ]: #include <stdio.h>
#include <unistd.h> // for sleep() function

// Structure to represent a note
struct Note {
    char name[10];
    int duration;
};

int main() {
    int n;
    FILE *file;

    printf(" Welcome to the Harmonium Composer! \n");
    printf("How many notes do you want to enter? ");
    scanf("%d", &n);

    struct Note composition[n];

    // Input the notes

    for(int i = 0; i < n; i++) {
        printf("\nEnter note %d (Sa, Re, Ga, Ma, Pa, Dha, Ni): ", i + 1);
        scanf("%s", composition[i].name);

        printf("Enter duration for %s (in seconds): ", composition[i].name);
        scanf("%d", &composition[i].duration);
    }

    printf("\n Playing your composition \n\n");

    // Play (simulate) the composition

    for(int i = 0; i < n; i++) {
        printf("Playing note: %s for %d sec\n", composition[i].name, composition[i].duration);
        sleep(composition[i].duration);
    }

    // Save to file

    file = fopen("composition.txt", "w");
    if (file == NULL) {
        printf("Error opening file!\n");
        return 1;
    }

    fprintf(file, " Your Harmonium Composition \n\n");

    for(int i = 0; i < n; i++) {
        fprintf(file, "Note: %s | Duration: %d sec\n", composition[i].name, composition[i].duration);
    }
}

```

```
}  
  
fclose(file);  
printf("\n Composition saved to 'composition.txt'\n");  
  
return 0;  
}
```