CS23302 – DATA TRUCTURES LABORATORY - Lab 3

STACK AND ITS APPLICATIONS

DATE:16.7.26

Note: wherever element_type replace it with appropriate datatype

stack.h

```
#ifndef STACK_H
#define STACK_H
typedef int element_type;
#define MIN_STACK_SIZE 3
#define EMPTY_TOS (-1)   /* Signifies an empty stack */
struct stack_record
{
   unsigned int stack_size;
   int top_of_stack;
   element_type *stack_array;
};
typedef struct stack_record *STACK;

STACK create_stack(unsigned int max_elements);
void  dispose_stack(STACK S);
int   is_empty(STACK S);
int   is_full(STACK S);
void  make_null(STACK S);
void  push(element_type x, STACK S);
void  pop(STACK S);              /* pop that discards top   (as in doc) */
element_type pop_and_return(STACK S);/* pop that returns + removes top     */
element_type top(STACK S);

#endif
```