3. What will be the output for the program with following operation?

   a. Create a new file “f1” and write “abcde” in it and close

   b. Open the file “f1” for writing with O_APPEND flag

   c. lseek to the beginning of the file

   d. Replace the existing data in the file with “12345”

Justify your answer.

Program:-

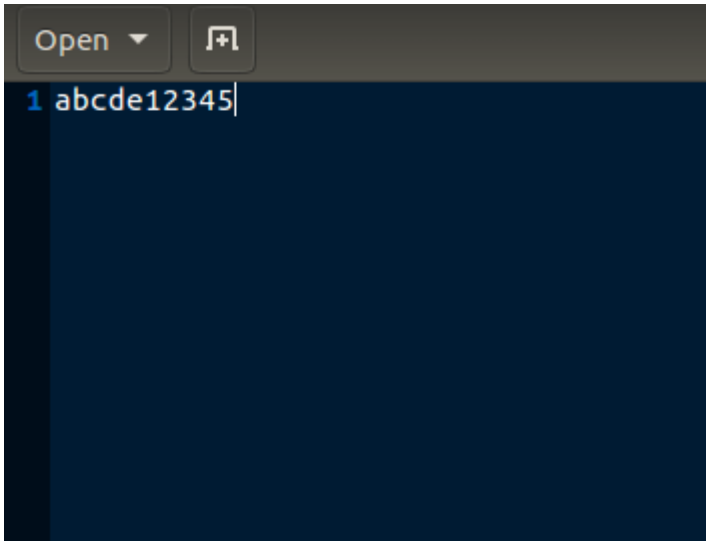
Open

```c
#include <stdio.h>
#include <sys/types.h>
#include <sys/stat.h>
#include <fcntl.h>
#include <errno.h>
#include <unistd.h>
int main() {
	int fd;
	fd = open("f1", O_WRONLY | O_CREAT, 777);
	if(fd == -1) {
		perror("error openeing file");
		return 0;
	}

	if(write(fd, "abcde", 5) != 5) {
		printf("hi\n");
		perror("error writing to file");
		return 0;
	}
	close(fd);

	fd = open("f1", O_WRONLY | O_APPEND);
	lseek(fd, 0, SEEK_SET);
	if(write(fd, "12345", 5) != 5) {
		printf("hi\n");
		perror("error writing to file");
		return 0;
	}
	close(fd);
	return 0;
}
```

File “f1” :-



Justification:

As given in open(2) documentation,

> **“**The file is opened in append mode. Before each *write(2)*, the file offset is positioned at the end of the file, as if with *lseek(2)*. “

So even though if we lseek to start of file and try to overwrite existing content it will still write new content to end of file.