1. Compile

```
[jessemendoza@Jesses-MacBook-Pro countnames % ls
countnames.c    include        Makefile        README.md       src             test
[jessemendoza@Jesses-MacBook-Pro countnames % gcc -o countnames countnames.c -Wall -Werror
[jessemendoza@Jesses-MacBook-Pro countnames % ls
countnames      countnames.c    include        Makefile        README.md       src             test
jessemendoza@Jesses-MacBook-Pro countnames %
```

2. Running test cases:

```
[jessemendoza@Jesses-MacBook-Pro countnames % ./countnames test/names.txt
Warning: Line 2 is empty.
Warning: Line 5 is empty.
Nicky: 1
Dave Joe: 2
Yuan Cheng Chang: 3
John Smith: 1
jessemendoza@Jesses-MacBook-Pro countnames %
```

```
[jessemendoza@Jesses-MacBook-Pro countnames % ./countnames test/names1.txt
Warning: Line 3 is empty.
Tom Wu: 3
jessemendoza@Jesses-MacBook-Pro countnames %
```

```
[jessemendoza@Jesses-MacBook-Pro countnames % ./countnames test/names2.txt
Jenn Xu: 2
Tom Wu: 1
jessemendoza@Jesses-MacBook-Pro countnames %
```

```
[jessemendoza@Jesses-MacBook-Pro countnames % ./countnames test/names3.txt
Warning: Line 2 is empty.
Warning: Line 5 is empty.
Nicky: 1
Dave Joe: 2
Yuan Cheng Chang: 3
John Smith: 1
jessemendoza@Jesses-MacBook-Pro countnames %
```

```
[jessemendoza@Jesses-MacBook-Pro countnames % ./countnames test/names_long.txt
MARY SMITH: 1
 : 99
PATRICIA JOHNSON: 1
LINDA WILLIAMS: 1
BARBARA JONES: 1
ELIZABETH BROWN: 1
JENNIFER DAVIS: 1
MARIA MILLER: 1
SUSAN WILSON: 1
MARGARET MOORE: 1
DOROTHY TAYLOR: 1
LISA ANDERSON: 1
NANCY THOMAS: 1
KAREN JACKSON: 1
BETTY WHITE: 1
HELEN HARRIS: 1
SANDRA MARTIN: 1
DONNA THOMPSON: 1
CAROL GARCIA: 1
RUTH MARTINEZ: 1
SHARON ROBINSON: 1
MICHELLE CLARK: 1
LAURA RODRIGUEZ: 1
SARAH LEWIS: 1
KIMBERLY LEE: 1
DEBORAH WALKER: 1
JESSICA HALL: 1
SHIRLEY ALLEN: 1
CYNTHIA YOUNG: 1
ANGELA HERNANDEZ: 1
MELISSA KING: 1
BRENDA WRIGHT: 1
AMY LOPEZ: 1
ANNA HILL: 1
REBECCA SCOTT: 1
VIRGINIA GREEN: 1
KATHLEEN ADAMS: 1
PAMELA BAKER: 1
MARTHA GONZALEZ: 1
DEBRA NELSON: 1
AMANDA CARTER: 1
STEPHANIE MITCHELL: 1
CAROLYN PEREZ: 1
CHRISTINE ROBERTS: 1
MARIE TURNER: 1
JANET PHILLIPS: 1
CATHERINE CAMPBELL: 1
FRANCES PARKER: 1
ANN EVANS: 1
JOYCE EDWARDS: 1
DIANE COLLINS: 1
ALICE STEWART: 1
JULIE SANCHEZ: 1
HEATHER MORRIS: 1
TERESA ROGERS: 1
DORIS REED: 1
GLORIA COOK: 1
EVELYN MORGAN: 1
JEAN BELL: 1
CHERYL MURPHY: 1
MILDRED BAILEY: 1
KATHERINE RIVERA: 1
JOAN COOPER: 1
ASHLEY RICHARDSON: 1
JUDITH COX: 1
ROSE HOWARD: 1
JANICE WARD: 1
KELLY TORRES: 1
NICOLE PETERSON: 1
JUDY GRAY: 1
CHRISTINA RAMIREZ: 1
KATHY JAMES: 1
THERESA WATSON: 1
BEVERLY BROOKS: 1
DENISE KELLY: 1
TAMMY SANDERS: 1
IRENE PRICE: 1
JANE BENNETT: 1
LORI WOOD: 1
RACHEL BARNES: 1
MARILYN ROSS: 1
ANDREA HENDERSON: 1
KATHRYN COLEMAN: 1
LOUISE B JENKINS: 1
SARA A PERRY: 1
ANNE J POWELL: 1
JACQUELINE K LONG: 1
WANDA M PATTERSON: 1
BONNIE HUGHES: 1
JULIA FLORES: 1
RUBY WASHINGTON: 1
LOIS BUTLER: 1
TINA SIMMONS: 1
PHYLLIS FOSTER: 1
NORMA GONZALES: 1
PAULA BRYANT: 1
DIANA ALEXANDER: 1
ANNIE RUSSELL: 1
LILLIAN GRIFFIN: 1
EMILY DIAZ: 1
jessemendoza@Jesses-MacBook-Pro countnames %
```

```
[jessemendoza@Jesses-MacBook-Pro countnames % ./countnames test/names_long_redundant.txt
John Smith: 1
Emily Davis: 1
Michael Johnson: 1
Sophia Lee: 1
Daniel Rodriguez: 1
Mia Hernandez: 1
David Kim: 1
Olivia Brown: 1
Anthony Martinez: 1
Evelyn Jackson: 1
Christopher Gonzalez: 1
Avery Taylor: 2
Andrew Lee: 2
Aria Perez: 1
Matthew Davis: 1
Victoria Wilson: 1
William Anderson: 1
Madison Green: 1
Joshua Wright: 1
Isabella Clark: 1
Nathan Davis: 2
Natalie Adams: 1
Ethan Martin: 1
Chloe Baker: 1
Ryan Lee: 1
Samantha Perez: 1
Benjamin Wright: 1
Aaliyah Garcia: 1
Jacob Cooper: 1
Elizabeth Martinez: 1
Tyler Thompson: 1
Hannah Scott: 1
Alexander Rodriguez: 1
Makayla Turner: 1
Nicholas Nguyen: 1
Sofia Hernandez: 1
Brandon Smith: 1
Grace Lee: 1
Christian Martinez: 1
Ava Jones: 1
William Turner: 1
Ella Wilson: 1
Jonathan Lee: 2
Lily Johnson: 1
Samuel Davis: 1
Avery Adams: 2
Gabriella Clark: 1
Dylan Anderson: 1
Lauren Kim: 1
James Lewis: 1
Makenna Wright: 1
Luke Davis: 1
Aaliyah Brown: 1
Christopher Anderson: 1
Abigail Perez: 1
Daniel Lee: 1
Jayden Robinson: 1
Leah Lee: 1
Nicholas Jackson: 1
Avery Lee: 1
Emma Hernandez: 1
Ethan Brown: 1
Madison Martinez: 1
Lucas Davis: 1
Aria Wright: 1
Ryan Rodriguez: 1
Sophia Turner: 1
Benjamin Davis: 1
Ella Garcia: 1
Chloe Kim: 1
William Scott: 1
Ava Smith: 1
David Wright: 1
Natalie Martin: 1
Isabella Adams: 1
Brandon Davis: 1
Makayla Hernandez: 1
Alexander Clark: 1
Emily Rodriguez: 1
Christopher Lee: 1
Olivia Lee: 1
Samantha Martinez: 1
Daniel Anderson: 1
Mia Lee: 1
Jacob Wright: 1
Elizabeth Adams: 1
Tyler Martinez: 1
Hannah Garcia: 1
Nicholas Davis: 1
Sofia Thompson: 1
Brandon Brown: 1
jessemendoza@Jesses-MacBook-Pro countnames %
```

```
[jessemendoza@Jesses-MacBook-Pro countnames % ./countnames test/names_long_redundant1.txt
Warning: Line 2 is empty.
Warning: Line 4 is empty.
Warning: Line 6 is empty.
Warning: Line 8 is empty.
MARY SMITH: 1
PATRICIA JOHNSON: 1
LINDA WILLIAMS: 1
BARBARA JONES: 1
ELIZABETH BROWN: 1
JENNIFER DAVIS: 1
MARIA MILLER: 1
SUSAN WILSON: 1
MARGARET MOORE: 1
DOROTHY TAYLOR: 1
LISA ANDERSON: 1
NANCY THOMAS: 1
KAREN JACKSON: 1
BETTY WHITE: 1
HELEN HARRIS: 1
SANDRA MARTIN: 1
DONNA THOMPSON: 1
CAROL GARCIA: 1
RUTH MARTINEZ: 1
SHARON ROBINSON: 1
MICHELLE CLARK: 1
LAURA RODRIGUEZ: 1
SARAH LEWIS: 1
KIMBERLY LEE: 1
DEBORAH WALKER: 1
JESSICA HALL: 1
SHIRLEY ALLEN: 1
CYNTHIA YOUNG: 1
ANGELA HERNANDEZ: 1
MELISSA KING: 1
BRENDA WRIGHT: 1
AMY LOPEZ: 1
ANNA HILL: 1
REBECCA SCOTT: 1
VIRGINIA GREEN: 1
KATHLEEN ADAMS: 1
PAMELA BAKER: 1
MARTHA GONZALEZ: 1
DEBRA NELSON: 1
AMANDA CARTER: 1
jessemendoza@Jesses-MacBook-Pro countnames %
```

```
[jessemendoza@Jesses-MacBook-Pro countnames % ./countnames test/names_long_redundant2.txt
STEPHANIE MITCHELL: 1
CAROLYN PEREZ: 1
CHRISTINE ROBERTS: 1
MARIE TURNER: 1
JANET PHILLIPS: 1
CATHERINE CAMPBELL: 1
FRANCES PARKER: 1
ANN EVANS: 1
JOYCE EDWARDS: 1
DIANE COLLINS: 1
ALICE STEWART: 1
JULIE SANCHEZ: 1
HEATHER MORRIS: 1
TERESA ROGERS: 1
DORIS REED: 1
GLORIA COOK: 1
EVELYN MORGAN: 1
JEAN BELL: 1
CHERYL MURPHY: 1
MILDRED BAILEY: 1
KATHERINE RIVERA: 1
JOAN COOPER: 1
ASHLEY RICHARDSON: 1
JUDITH COX: 1
ROSE HOWARD: 1
JANICE WARD: 1
KELLY TORRES: 1
NICOLE PETERSON: 1
JUDY GRAY: 1
CHRISTINA RAMIREZ: 1
KATHY JAMES: 1
THERESA WATSON: 1
BEVERLY BROOKS: 1
DENISE KELLY: 1
TAMMY SANDERS: 1
IRENE PRICE: 1
JANE BENNETT: 1
LORI WOOD: 1
RACHEL BARNES: 1
MARILYN ROSS: 1
ANDREA HENDERSON: 1
KATHRYN COLEMAN: 1
LOUISE B JENKINS: 1
SARA A PERRY: 1
jessemendoza@Jesses-MacBook-Pro countnames %
```

```
[jessemendoza@Jesses-MacBook-Pro countnames % ./countnames test/names_long_redundant3.txt
ANNE J POWELL: 1
JACQUELINE K LONG: 1
WANDA M PATTERSON: 1
BONNIE HUGHES: 1
JULIA FLORES: 1
RUBY WASHINGTON: 1
LOIS BUTLER: 1
TINA SIMMONS: 1
PHYLLIS FOSTER: 1
NORMA GONZALES: 1
PAULA BRYANT: 1
DIANA ALEXANDER: 1
ANNIE RUSSELL: 1
LILLIAN GRIFFIN: 1
EMILY DIAZ: 1
ROBIN HAYES: 1
MARY SMITH: 2
PATRICIA JOHNSON: 2
LINDA WILLIAMS: 2
BARBARA JONES: 2
ELIZABETH BROWN: 2
JENNIFER DAVIS: 1
MARIA MILLER: 1
SUSAN WILSON: 1
MARGARET MOORE: 1
DOROTHY TAYLOR: 1
LISA ANDERSON: 1
NANCY THOMAS: 1
KAREN JACKSON: 1
BETTY WHITE: 1
HELEN HARRIS: 1
SANDRA MARTIN: 1
DONNA THOMPSON: 1
CAROL GARCIA: 1
RUTH MARTINEZ: 1
SHARON ROBINSON: 1
MICHELLE CLARK: 1
LAURA RODRIGUEZ: 1
SARAH LEWIS: 1
KIMBERLY LEE: 1
DEBORAH WALKER: 1
jessemendoza@Jesses-MacBook-Pro countnames %
```

```
[jessemendoza@Jesses-MacBook-Pro countnames % ./countnames test/testCase1.txt
Warning: Line 4 is empty.
Warning: Line 6 is empty.
Mike Lam: 1
Jimmy Le: 1
J i m m y L e: 1
M ike Lam: 1
JeSsE: 1
JESSE: 1
jessemendoza@Jesses-MacBook-Pro countnames %
```

```
[jessemendoza@Jesses-MacBook-Pro countnames % ./countnames test/testCase2.txt
Warning: Line 2 is empty.
Warning: Line 6 is empty.
Warning: Line 10 is empty.
Warning: Line 14 is empty.
Jose Mendez: 1
Ana Nguyen: 2
Charlie Kirk: 1
Barrack Obama: 1
Tommy Obama: 1
 : 1
 Tim Tran: 1
Andrew White: 2
ANDREW WHITE: 1
Nguyen Ana: 1
jessemendoza@Jesses-MacBook-Pro countnames %
```

```
[jessemendoza@Jesses-MacBook-Pro countnames % ./countnames test/testCase3.txt
Warning: Line 6 is empty.
Warning: Line 10 is empty.
Warning: Line 13 is empty.
Warning: Line 16 is empty.
ABRAHAM LINCOLN: 1
ABRAHAM RAMIREZ: 1
 ABRAHAM LINCOLN: 1
ADRIAN ADRIAN: 1
ADRIAN: 1
JADA NGUYEn: 1
GEORGE WASHINGTON: 2
JADA NGUYEN: 1
JORGE PEREZ: 1
JESSE MENDOZA: 1
MENDOZA JESSE: 1
jessemendoza@Jesses-MacBook-Pro countnames % 
```