**Zadanie 8.12**

**Dana jest relacja R o schemacie H = {A, B, C, D, E, F} oraz zbiór zależności funkcyjnych**

**F = {{A, B} → {C, E}, {A, D} → E, E → D, E → {B, C}, A → F}.**

**Która z poniższych dekompozycji jest dekompozycją bezstratną?**

**1. H1 = {A, B, C, D}, H2 = {D, E, F}**

**F = {{A, B} → {C, E}, {A, D} → E, E → D, E → {B, C}, A → F}**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | A | B | C | D | E | F |
| H1 | v | v | v | v |  |  |
| H2 |  |  |  | v | v | v |

Odp. DEKOMPOZYCJA STRATNA

**2. H1 = {A, B, E}, H2 = {C, D, E, F}**

**F = {{A, B} → {C, E}, {A, D} → E, E → D, E → {B, C}, A → F}**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | A | B | C | D | E | F |
| H1 | v | v | o | o | v |  |
| H2 |  | o | v | v | v | v |

Odp. DEKOMPOZYCJA STRATNA

**3. H1 = {A, B, E, F}, H2 = {C, D, E}**

**F = {{A, B} → {C, E}, {A, D} → E, E → D, E → {B, C}, A → F}**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | A | B | C | D | E | F |
| H1 | v | v | o | o | v | v |
| H2 |  | O | v | v | v |  |

Odp. DEKOMPOZYCJA BESTRATNA

**4. H1 = {A, E}, H2 = {B, E, F}, H3 = {C, D, E}**

**F = {{A, B} → {C, E}, {A, D} → E, E → D, E → {B, C}, A → F}**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | A | B | C | D | E | F |
| H1 | v |  |  | o | v |  |
| H2 |  | v |  | o | v | v |
| H3 |  |  | v | v | v |  |

Odp. DEKOMPOZYCJA STRATNA

**5. H1 = {A, E}, H2 = {B, E, F}, H3 = {A, C, D, F}**

**F = {{A, B} → {C, E}, {A, D} → E, E → D, E → {B, C}, A → F}**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | A | B | C | D | E | F |
| H1 | v |  |  |  | v |  |
| H2 |  | v |  |  | v | v |
| H3 | v |  | v | v |  | v |

Odp. DEKOMPOZYCJA STRATNA

**6. H1 = {A, B, C, E}, H2 = {A, B, D}, H3 = {A, F}**

**F = {{A, B} → {C, E}, {A, D} → E, E → D, E → {B, C}, A → F}**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | A | B | C | D | E | F |
| H1 | v | v | v | o | v | o |
| H2 | v | v | o | v | o | o |
| H3 | v |  |  |  |  | v |

Odp. DEKOMPOZYCJA BESTRATNA